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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,578	11/16/2001	Marcel F.C. Schemmann	11890/3	7446

7590 08/22/2005

KENYON & KENYON
One Broadway
New York, NY 10004

EXAMINER	
PHAN, HANH	

ART UNIT	PAPER NUMBER
2638	

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/998,578	SCHEMMANN ET AL.	
	Examiner	Art Unit	
	Hanh Phan	2638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *24 and 25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *25* is/are allowed.

6)☒ Claim(s) *24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 08/18/2004.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi (US Patent No. 6,671,464) in view of Strasser et al (US Patent No. 6,658,215).

Regarding claim 24, referring to Figure 5, Kikuchi teaches a method for compensating for PMD effects electronically comprising:

receiving (i.e., O/E converter 120, Fig. 5) a set of I and Q data streams;

a compensation circuit (i.e., compensating circuit 100, Fig. 5) for compensating the polarization mode dispersion of the signal (Fig. 5, col. 8, lines 40-60).

Kikuchi differs from claim 24 in that he does not specifically teach compensating for phase noise and first order polarization mode in a first stage, the outputting then signals from the first stage to a second state for compensating high order PMD effects. However, Strasser in US Patent 6,658,215 teaches compensating for phase noise and first order polarization mode in a first stage, then outputting the signals from the first stage to a second state for compensating high order PMD effects (see Fig. 3, col. 5,

lines 45-67 and col. 6, lines 1-18). Therefore, it would have been obvious to one having skill in the art at the time invention was made to incorporate the compensating for phase noise and first order polarization mode in a first stage, then outputting the signals from the first stage to a second state for compensating high order PMD effects as taught by Strasser in the system of Kikuchi. One of ordinary skill in the art would have been motivated to do this since Strasser suggests in column 5, lines 45-67 and col. 6, lines 1-18 that using such the compensating for phase noise and first order polarization mode in a first stage, then outputting the signals from the first stage to a second state for compensating high order PMD effects have advantage of allowing compensating the first order and second order polarization mode dispersion of the signal.

4. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi (US Patent No. 6,671,464) in view of Mecozzi et al (US Patent No. 6,674,972).

Regarding claim 24, referring to Figure 5, Kikuchi teaches a method for compensating for PMD effects electronically comprising:

receiving (i.e., O/E converter 120, Fig. 5) a set of I and Q data streams;

a compensation circuit (i.e., compensating circuit 100, Fig. 5) for compensating the polarization mode dispersion of the signal (Fig. 5, col. 8, lines 40-60).

Kikuchi differs from claim 24 in that he does not specifically teach compensating for phase noise and first order polarization mode in a first stage, the outputting then signals from the first stage to a second state for compensating high order PMD effects. However, Mecozzi in US Patent 6,674,972 teaches compensating for phase noise and

first order polarization mode in a first stage, then outputting the signals from the first stage to a second state for compensating high order PMD effects (see Fig. 5, col. 7, lines 15-62). Therefore, it would have been obvious to one having skill in the art at the time invention was made to incorporate the compensating for phase noise and first order polarization mode in a first stage, then outputting the signals from the first stage to a second state for compensating high order PMD effects as taught by Mecozzi in the system of Kikuchi. One of ordinary skill in the art would have been motivated to do this since Mecozzi suggests in column 7, lines 15-62 that using such the compensating for phase noise and first order polarization mode in a first stage, then outputting the signals from the first stage to a second state for compensating high order PMD effects have advantage of allowing compensating the first order and second order polarization mode dispersion of the signal.

Allowable Subject Matter

5. Claim 25 is allowed.

Response to Arguments

6. Applicant's arguments with respect to claim 24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (571)272-3035.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye, can be reached on (571)272-3078. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

HANH PHAN
PRIMARY EXAMINER

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08/18/05

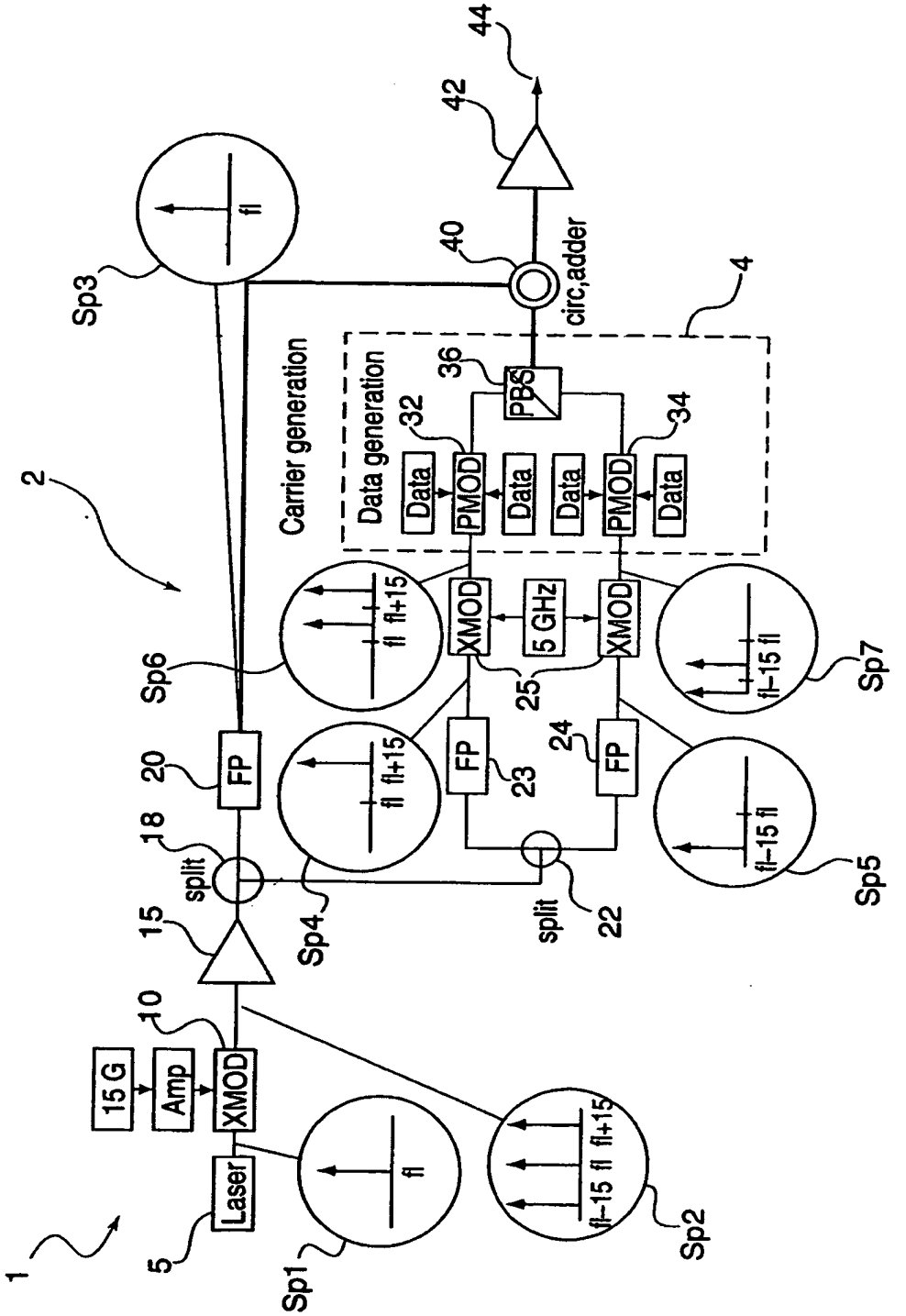

FIG. 1

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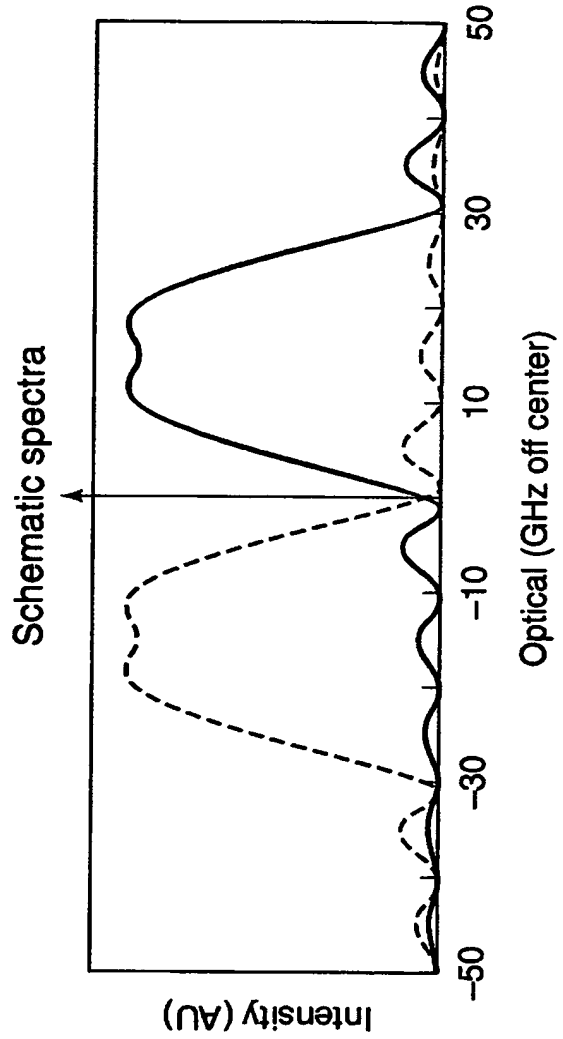

FIG. 2

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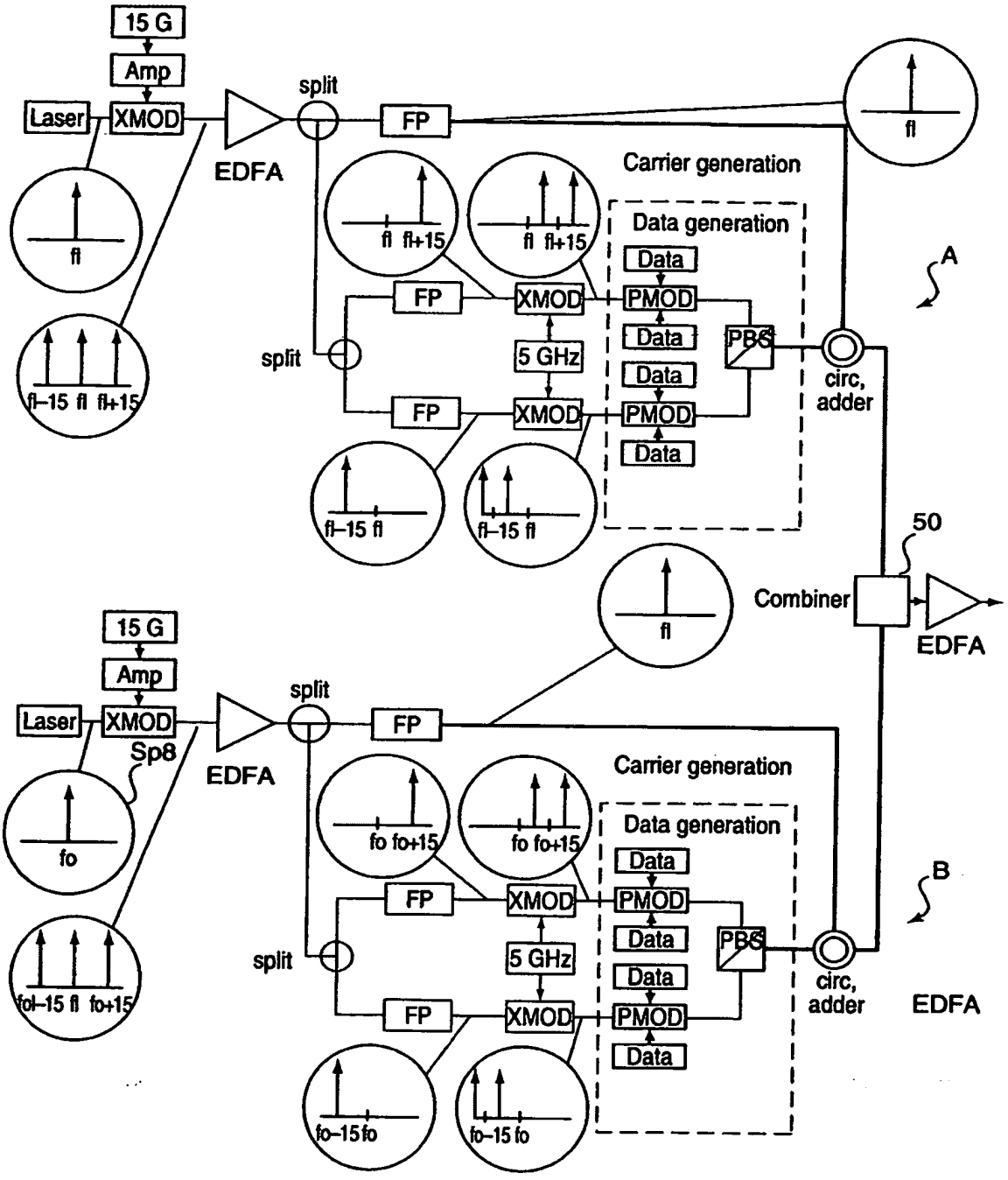

FIG. 3

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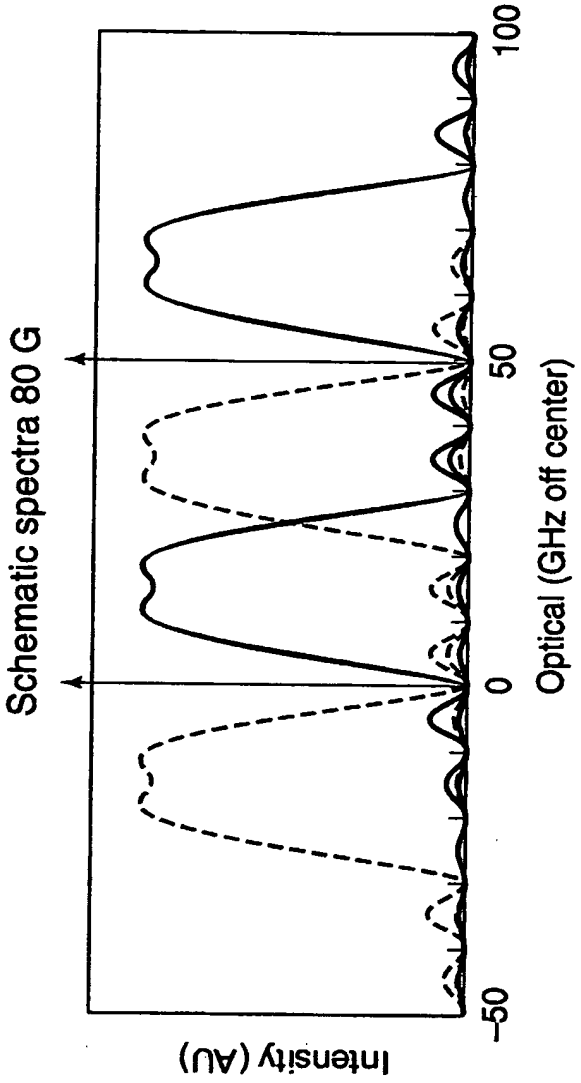

FIG. 4

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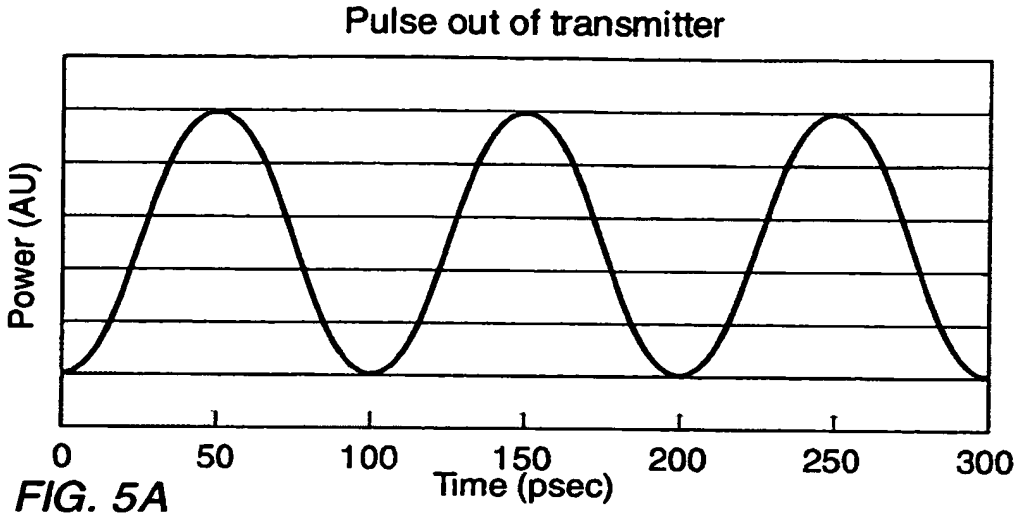

FIG. 5A

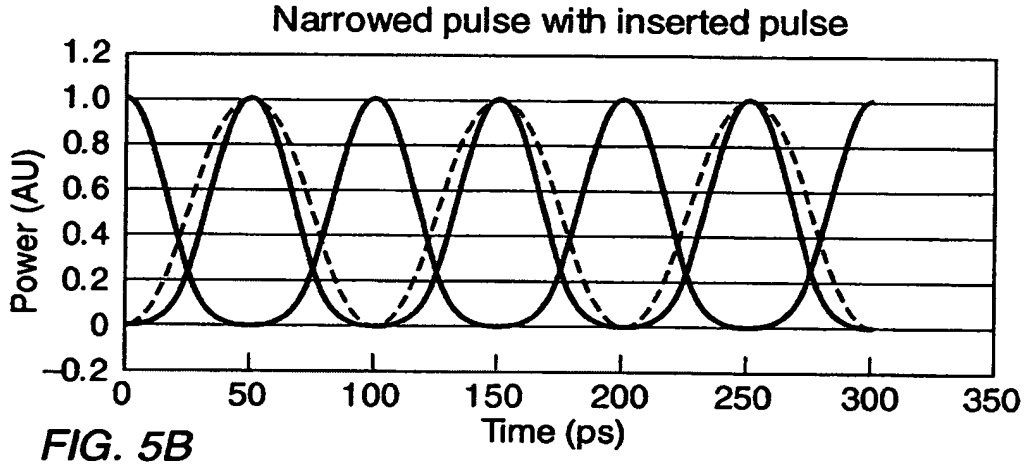

FIG. 5B

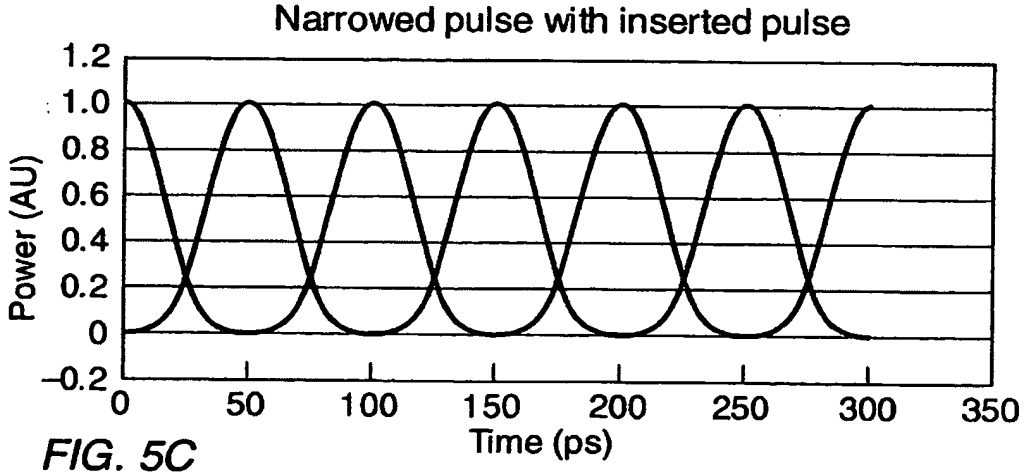

FIG. 5C

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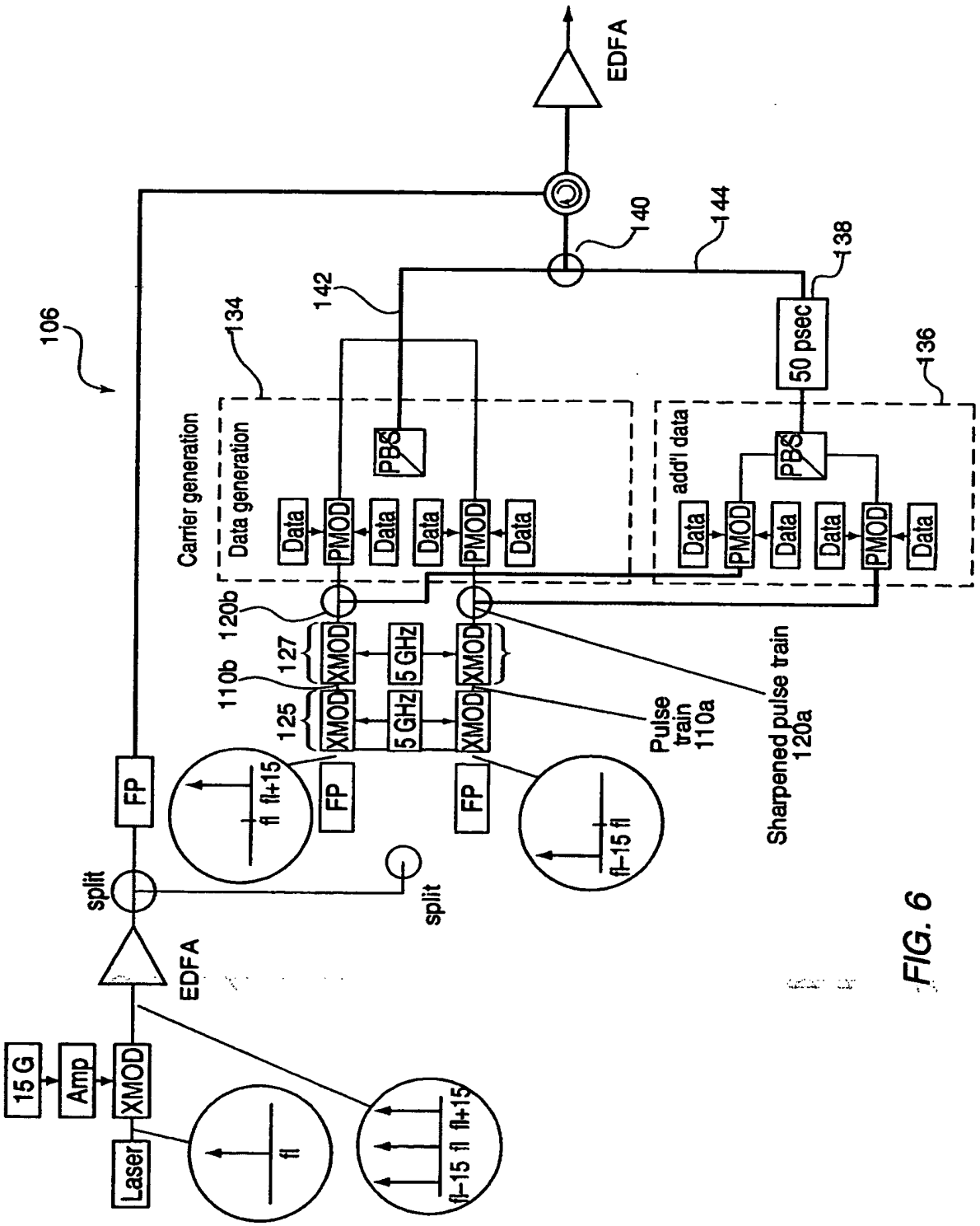

FIG. 6

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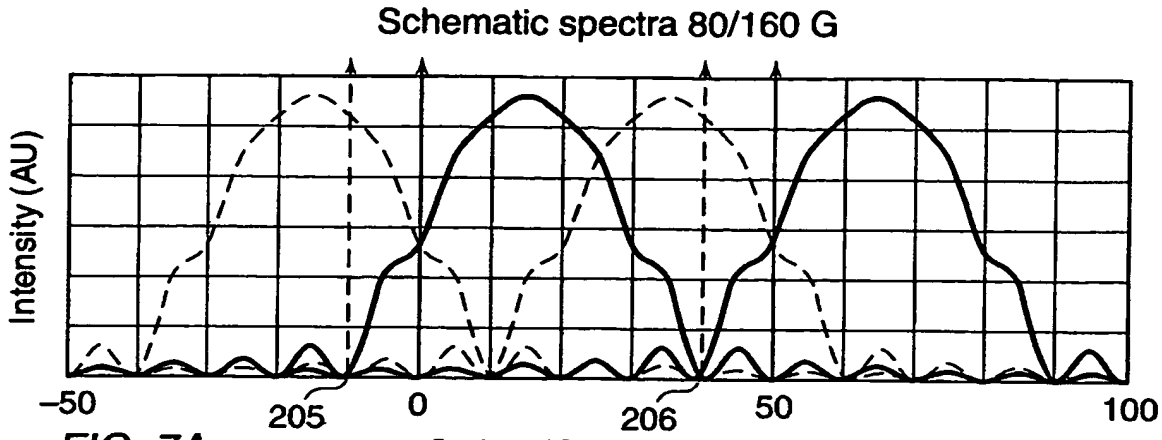

FIG. 7A

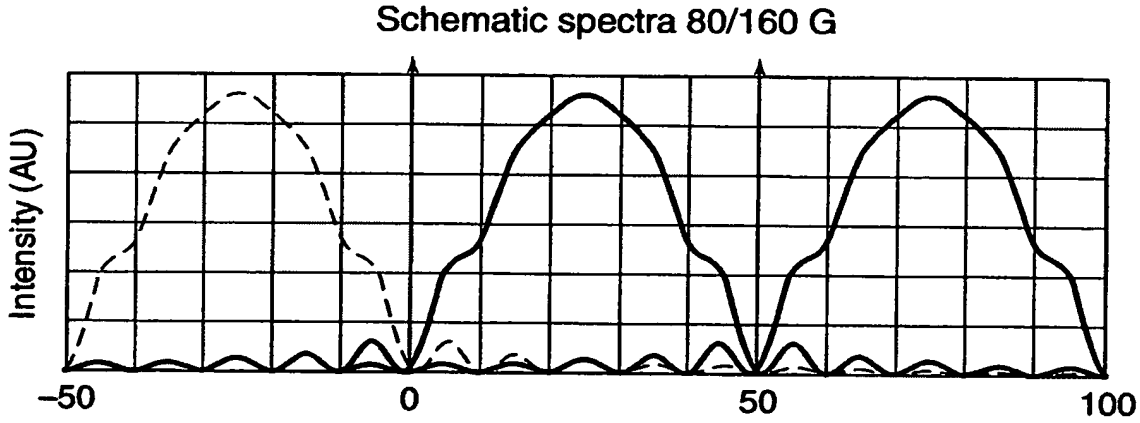

FIG. 7B

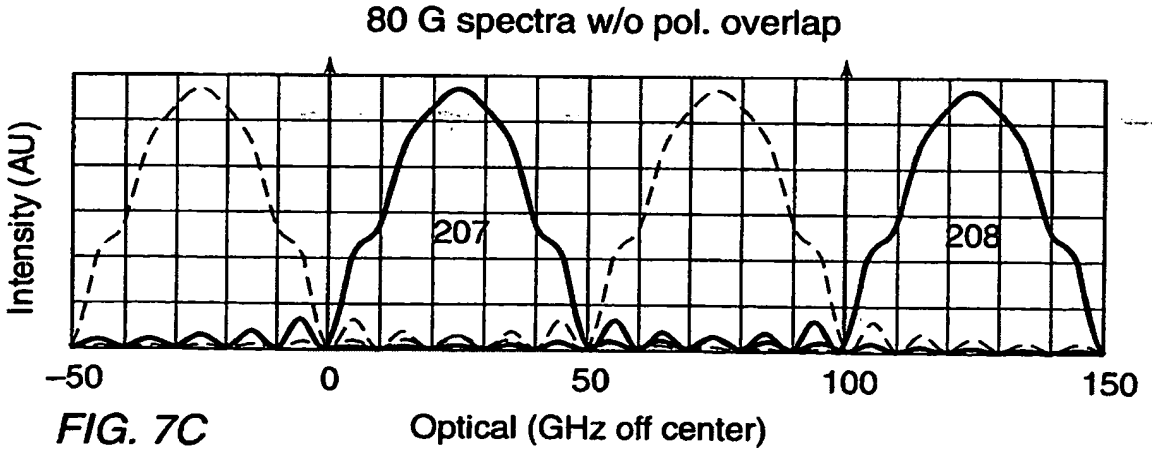

FIG. 7C

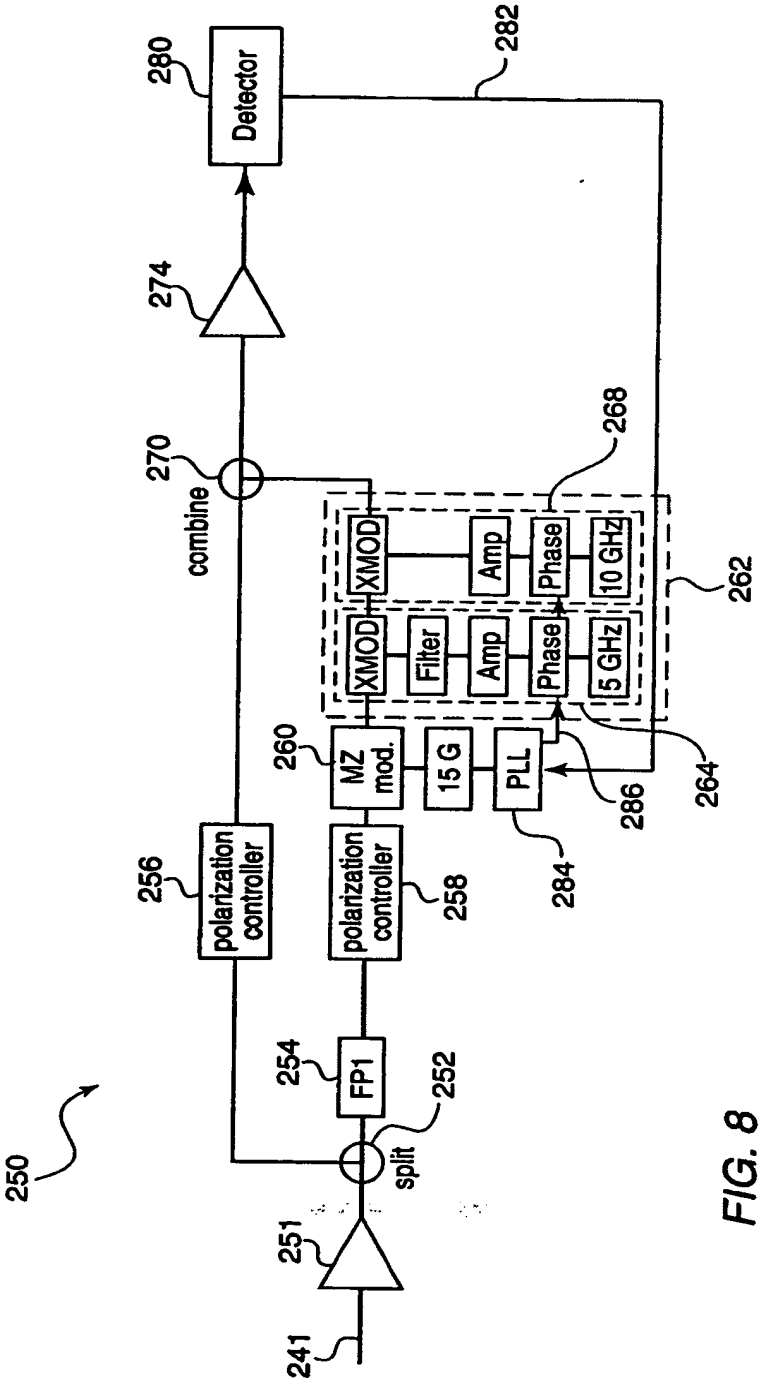
250
241
251
split
252
FP1
254
polarization controller
256
polarization controller
258
MZ mod.
260
15 G
PLL
284
286
264
XMOD
Filter
Amp
Phase
5 GHz
XMOD
Amp
Phase
10 GHz
262
268
combine
270
274
Detector
280
282

FIG. 8

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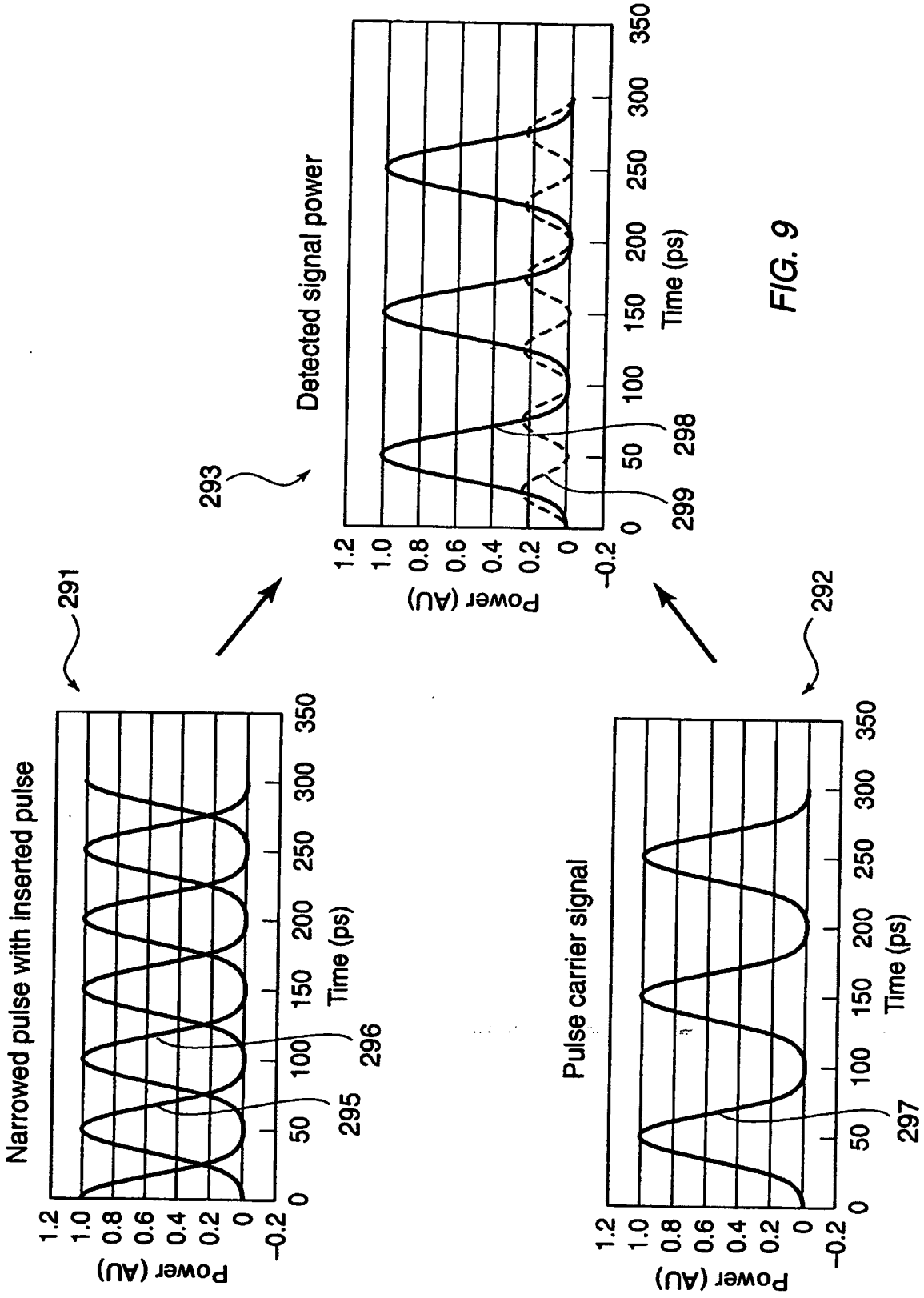

FIG. 9

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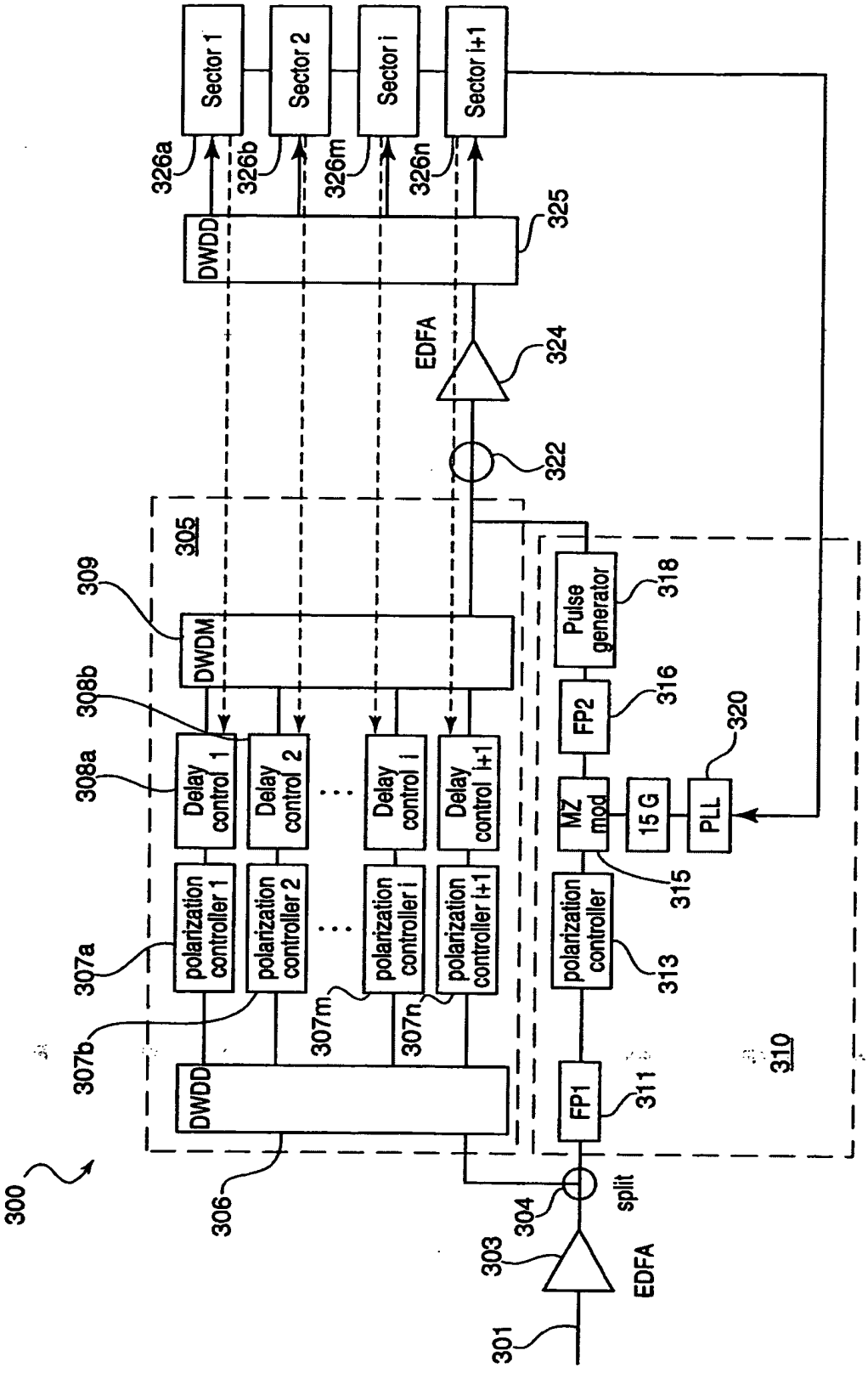

FIG. 10

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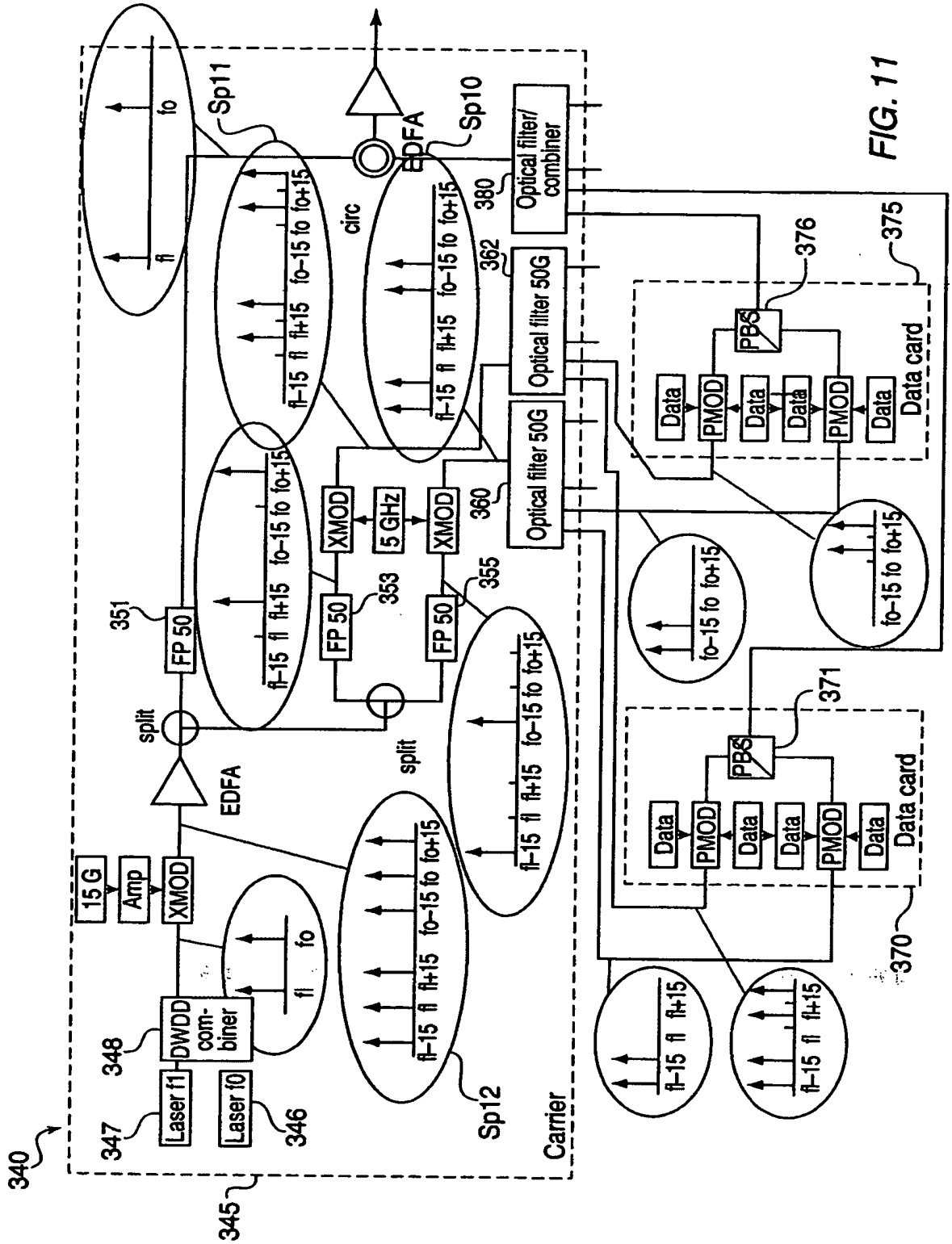

FIG. 11

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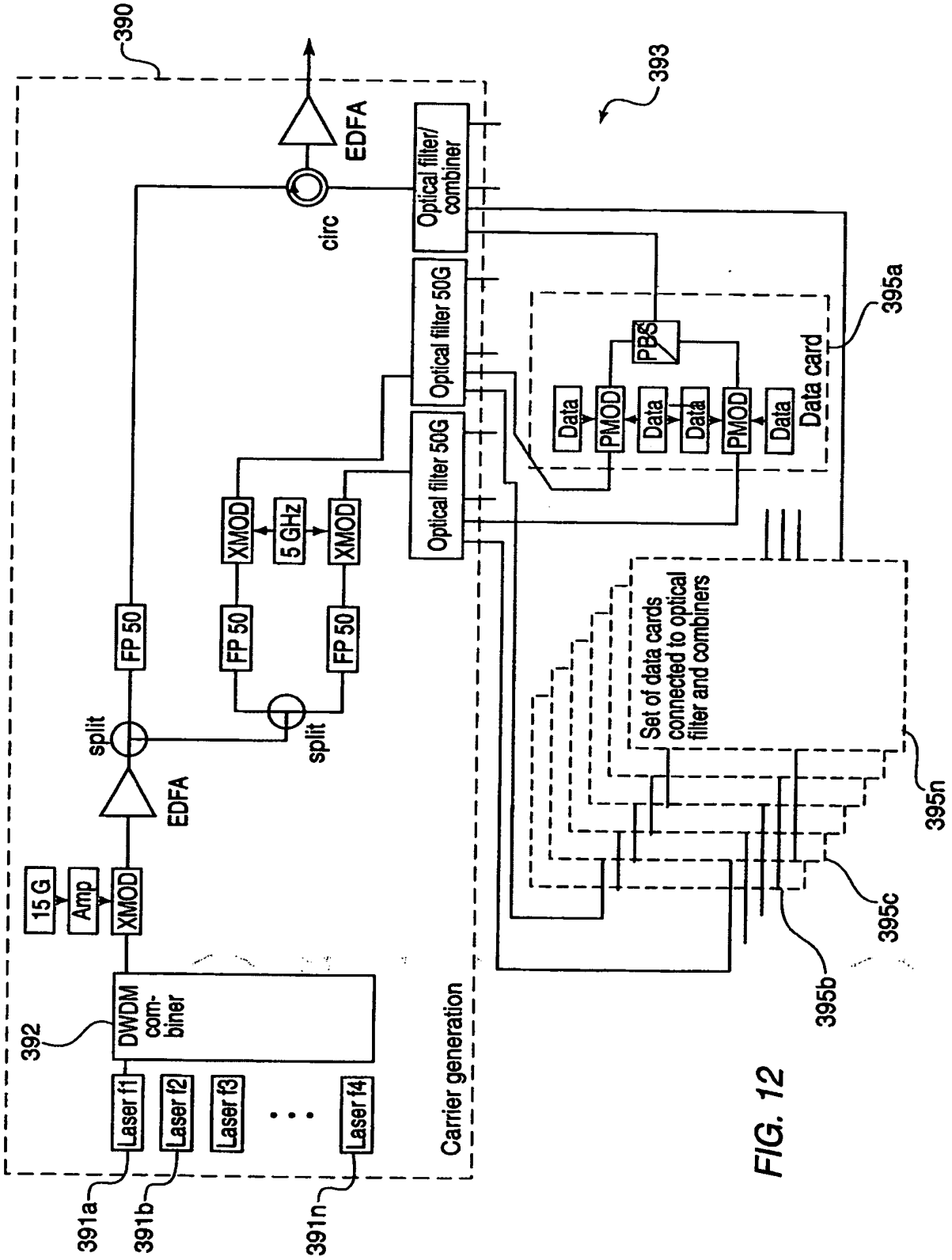

FIG. 12

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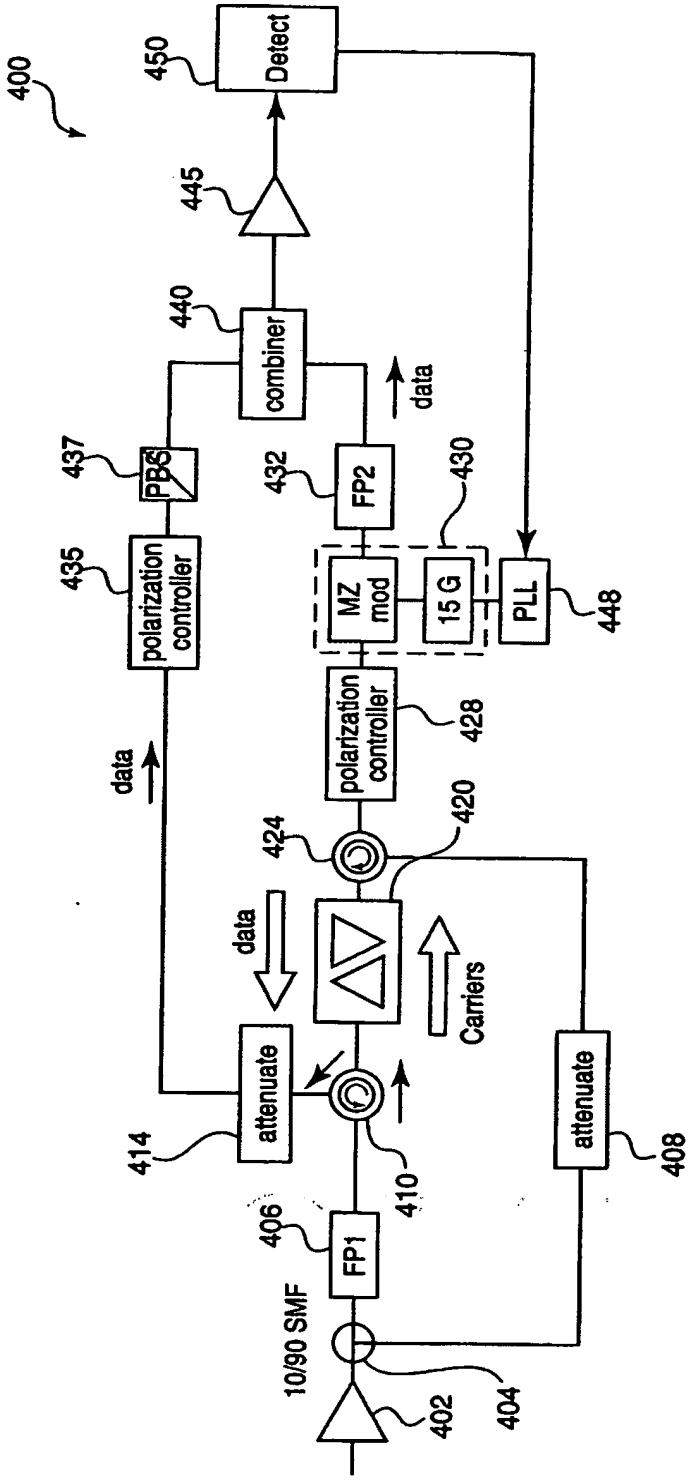

FIG. 13

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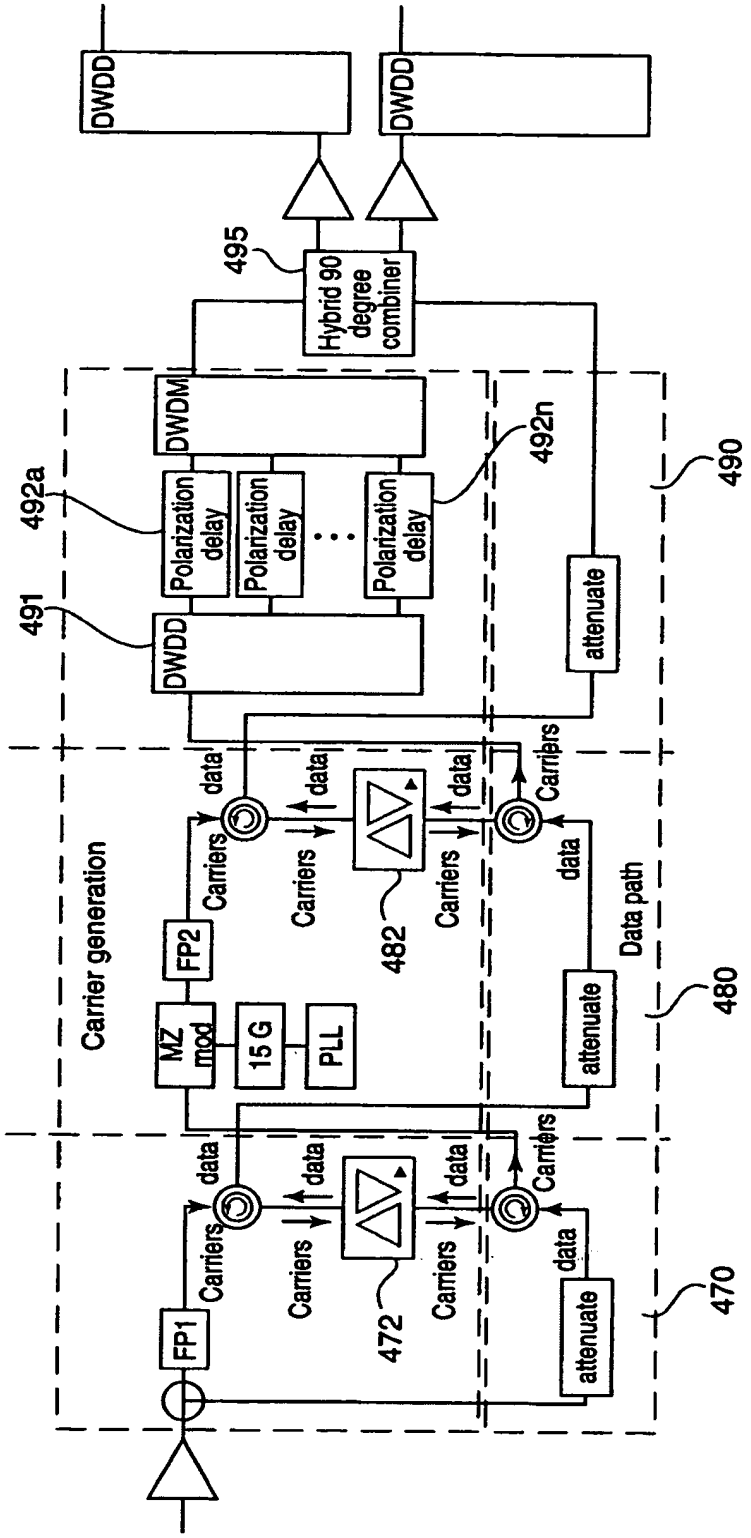

FIG. 14A

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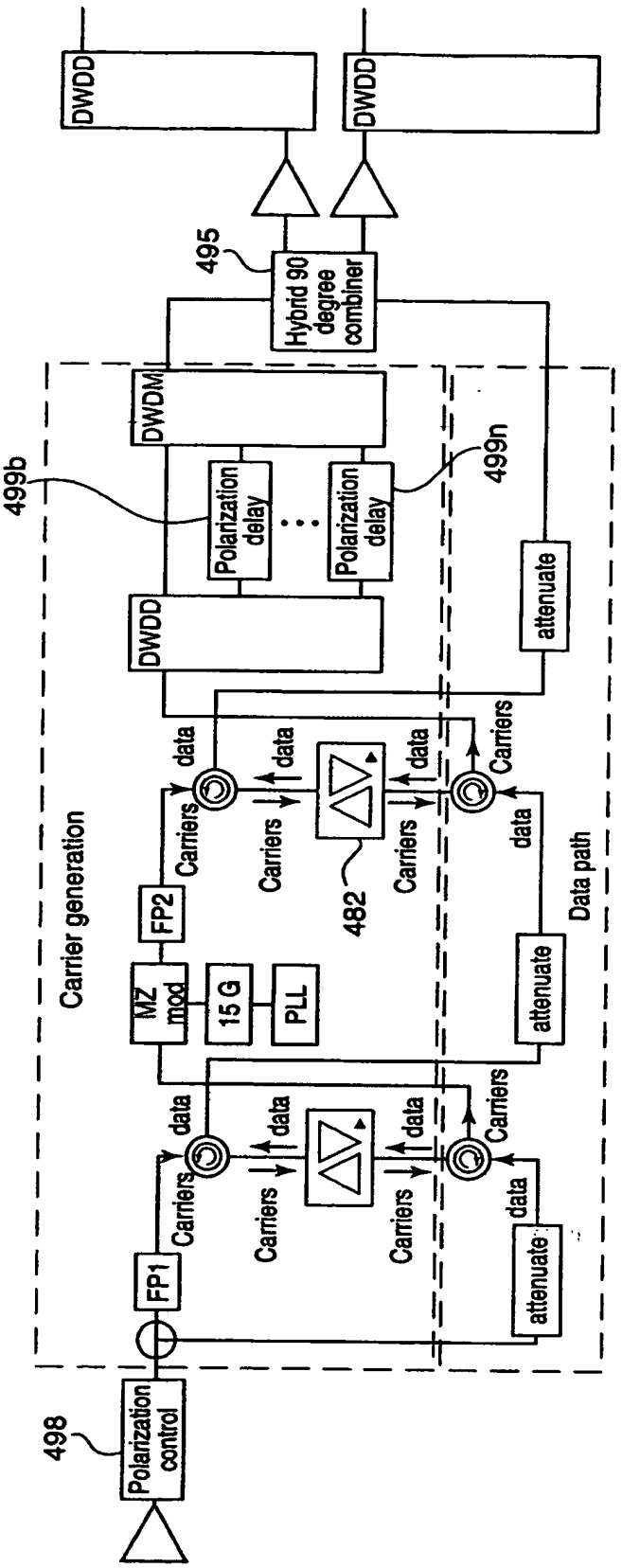

FIG. 14B

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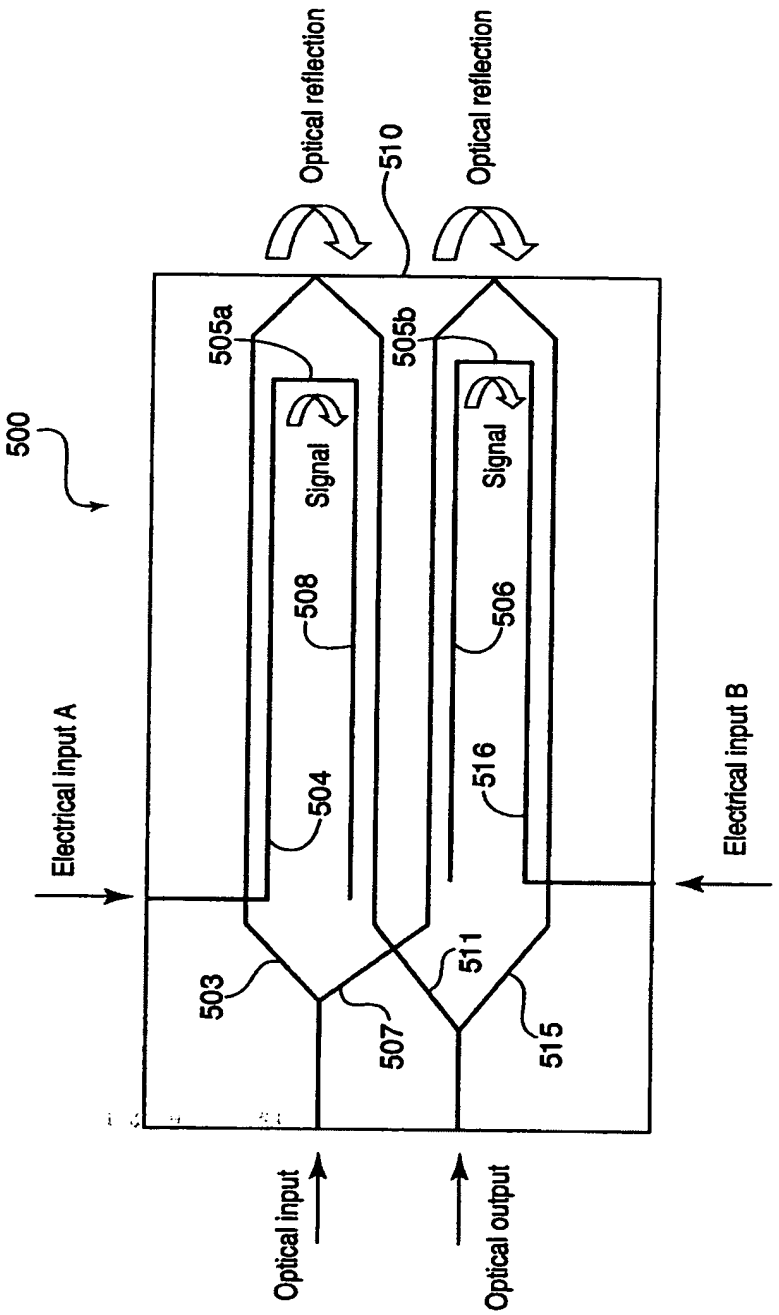

FIG. 15

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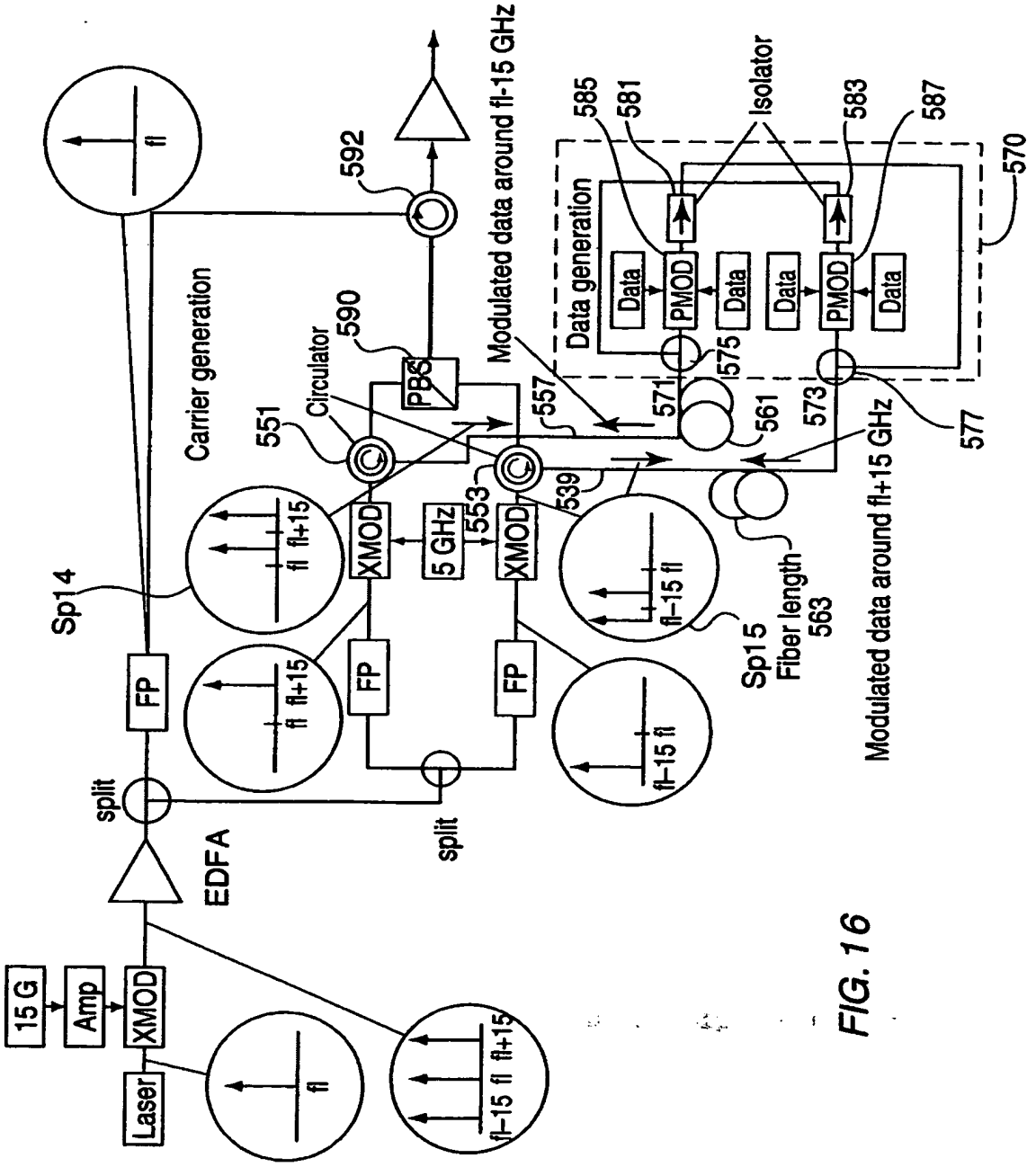

FIG. 16

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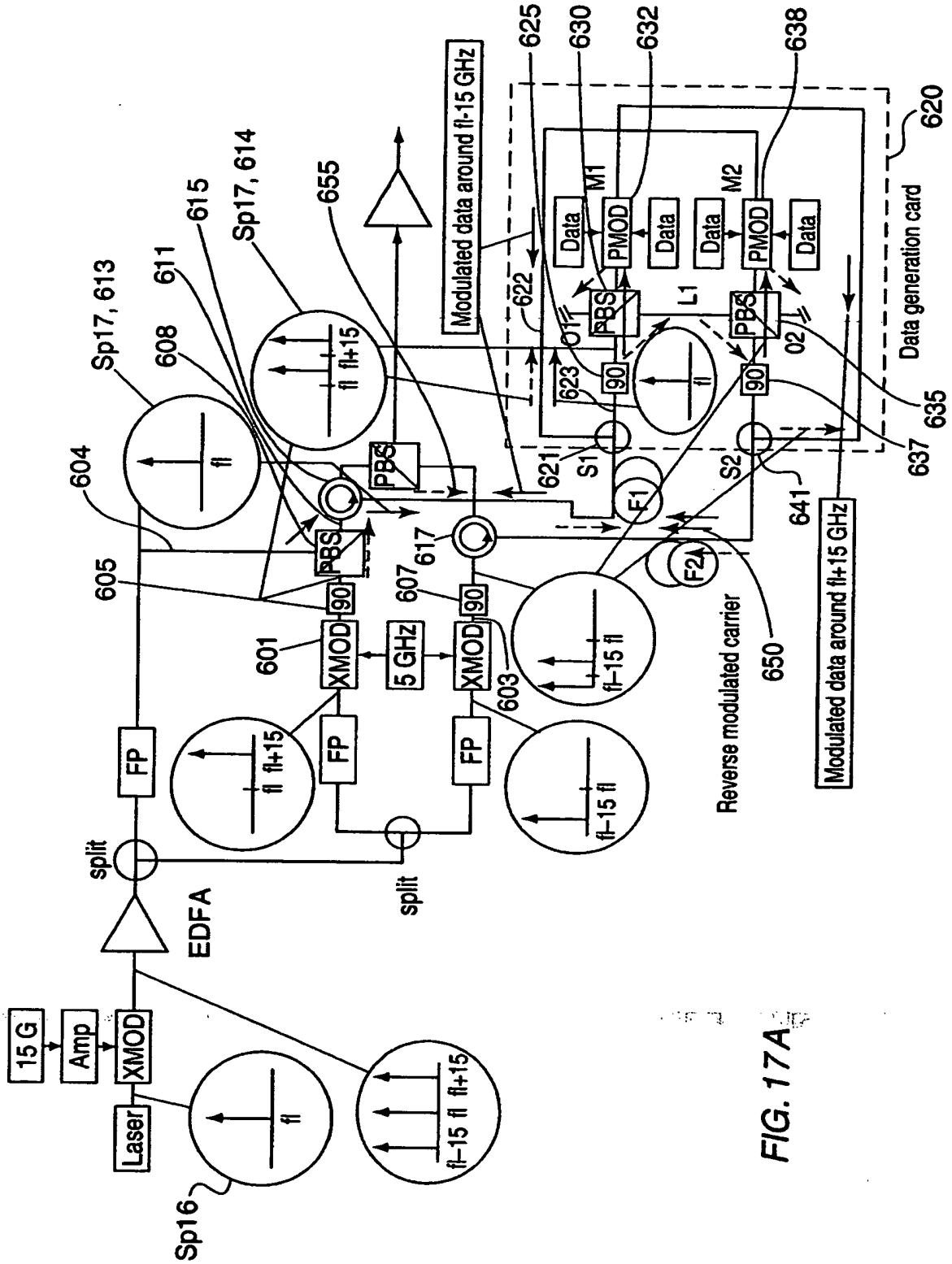

FIG. 17A

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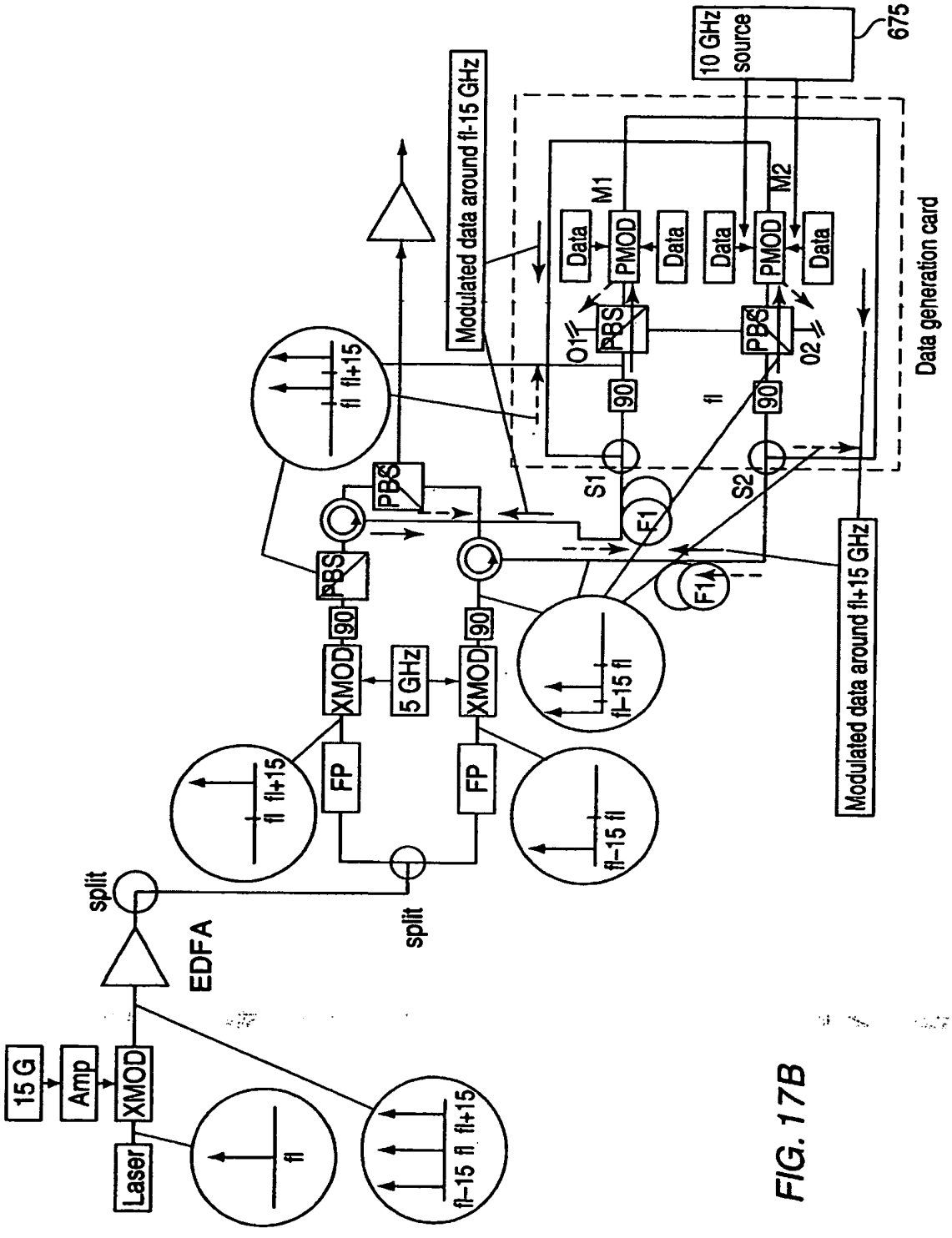

FIG. 17B

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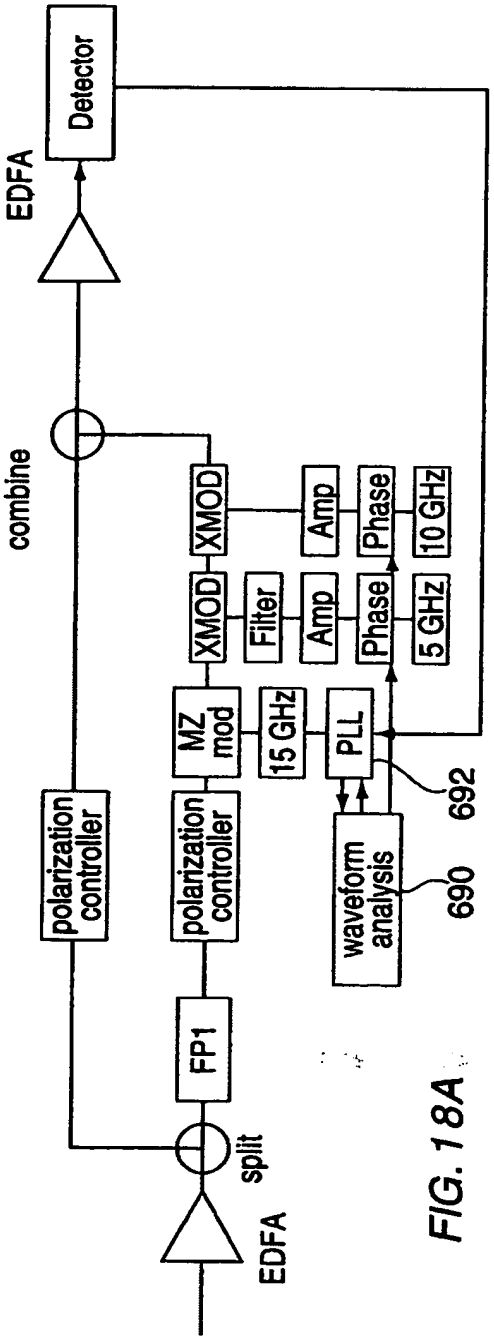

FIG. 18A

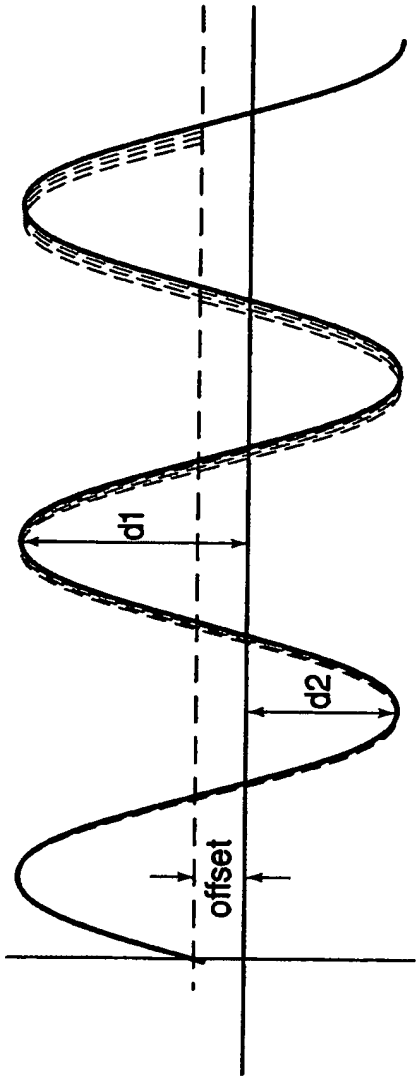

FIG. 18B

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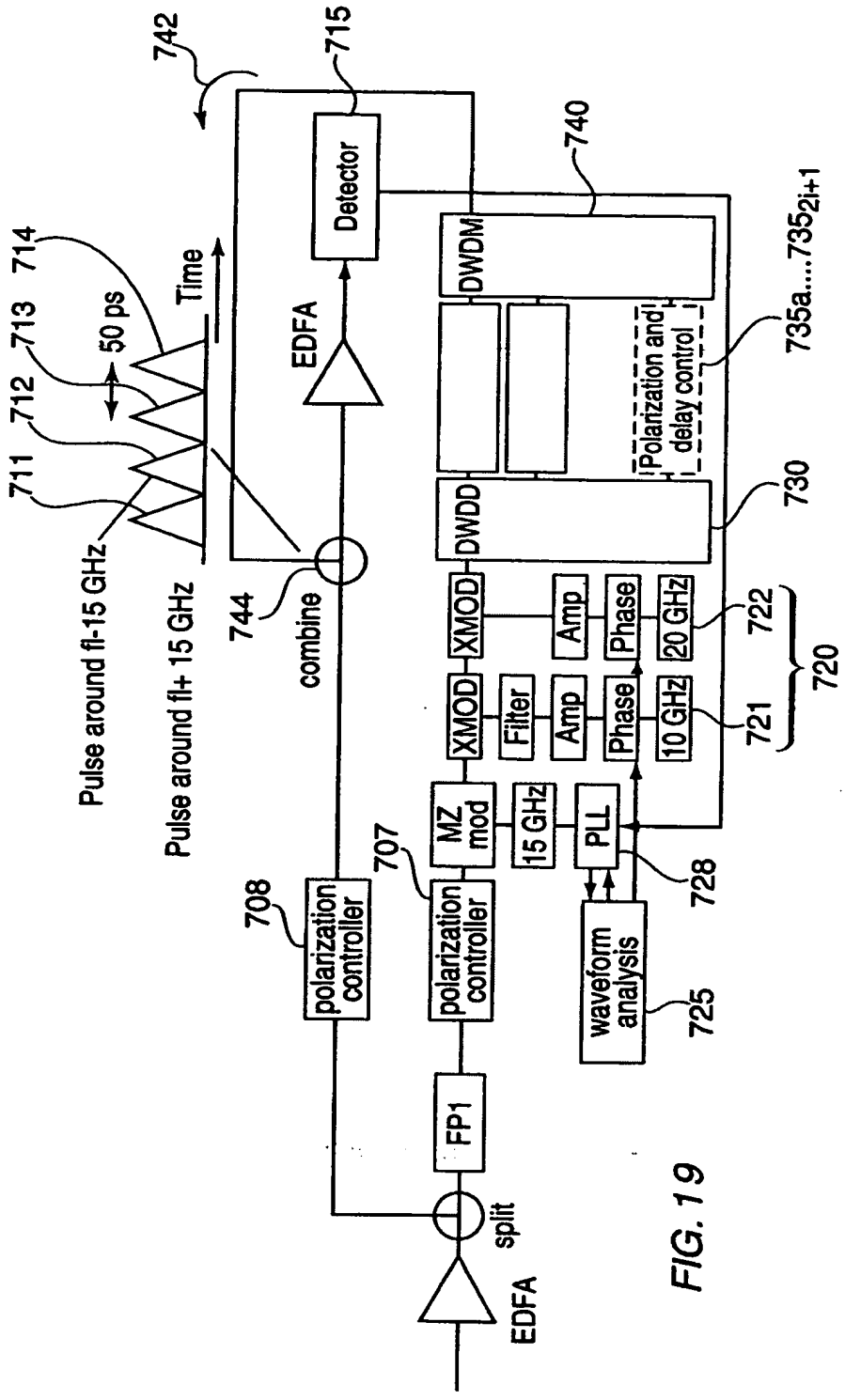

FIG. 19

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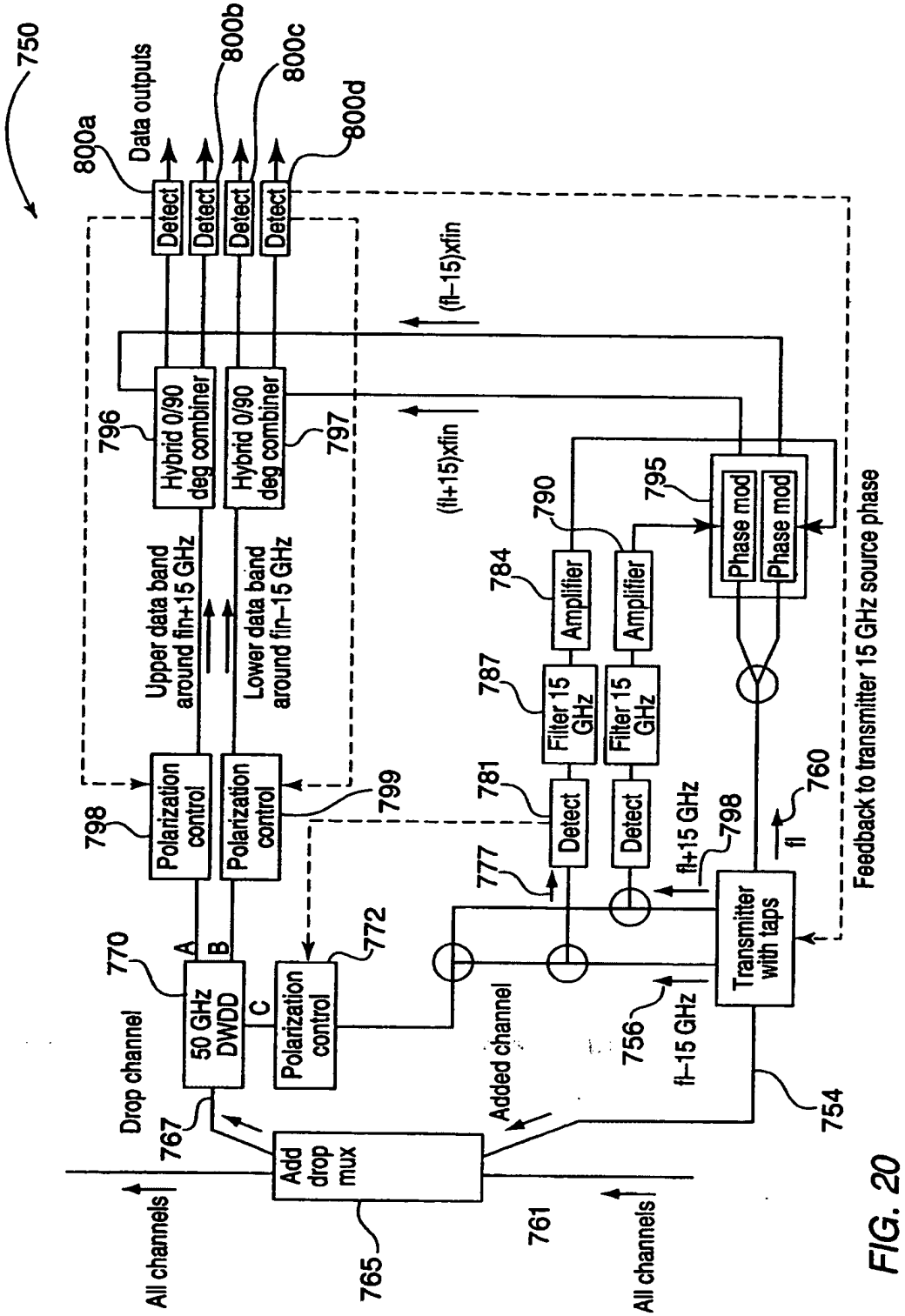

FIG. 20

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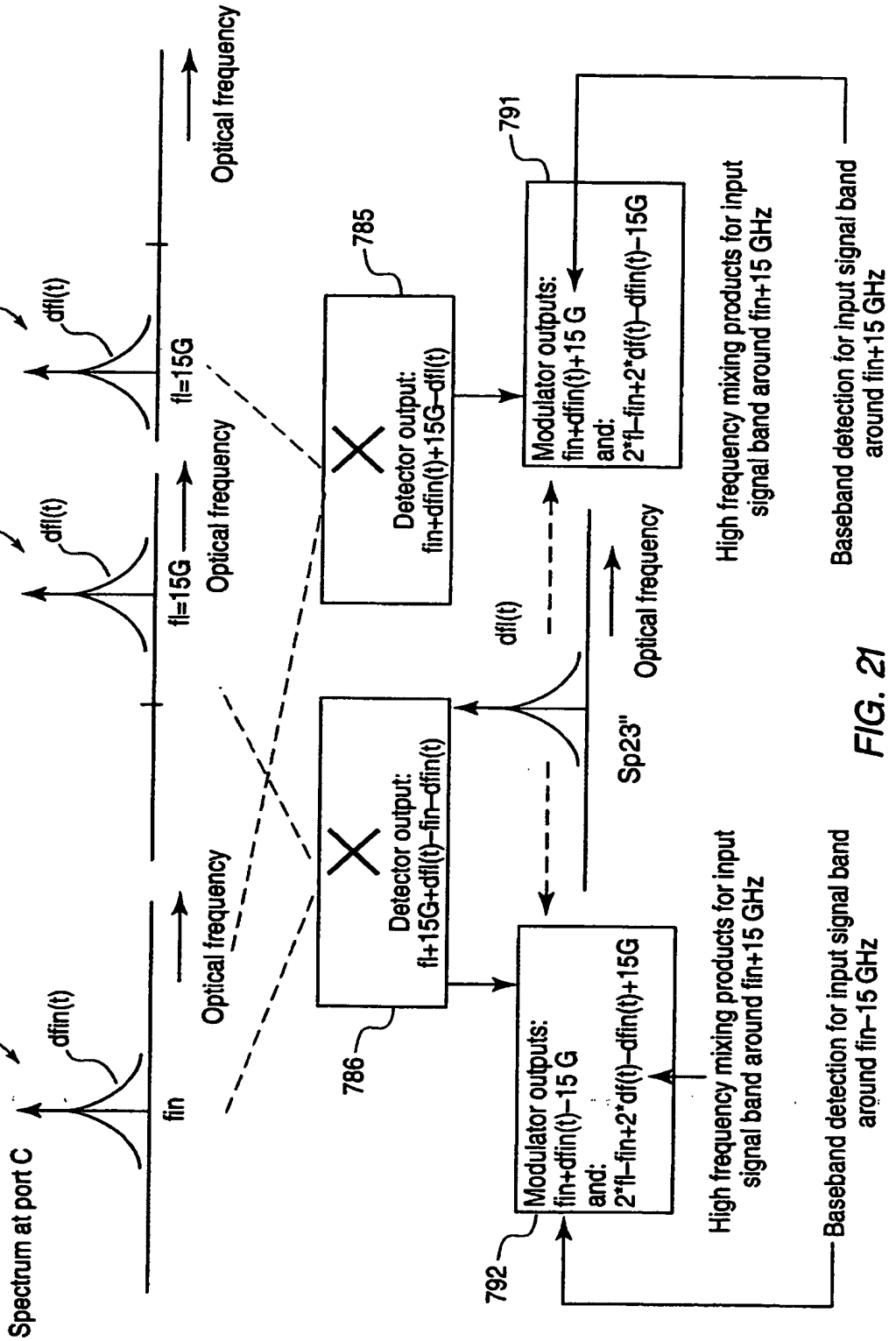

FIG. 21

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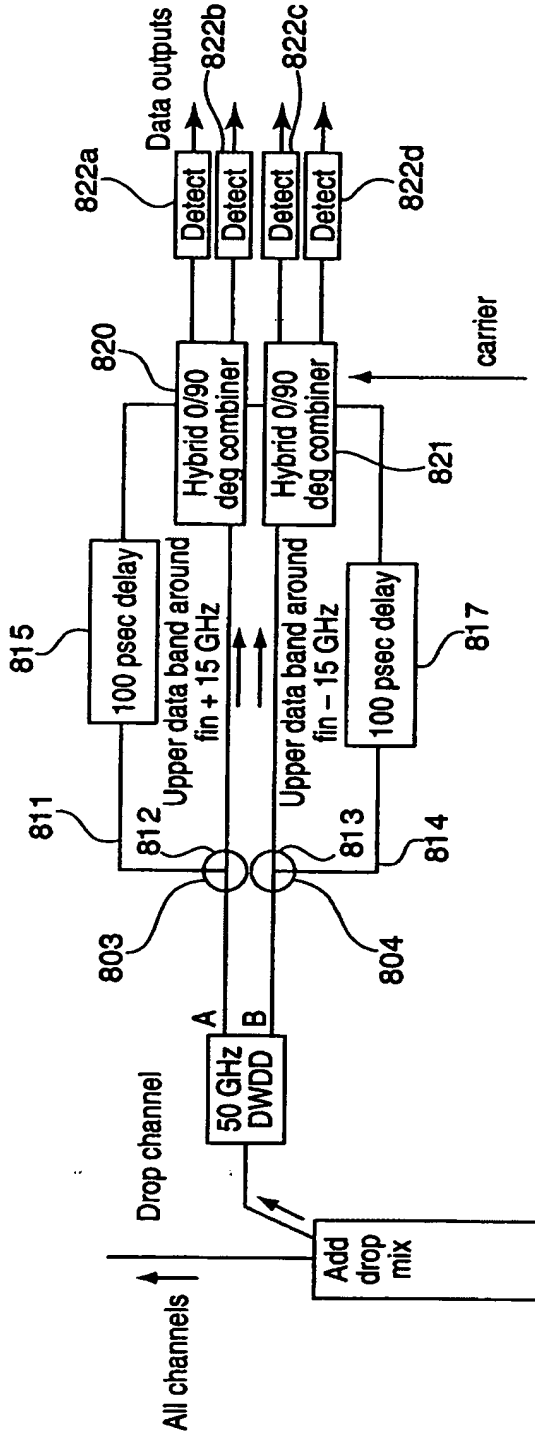

FIG. 22

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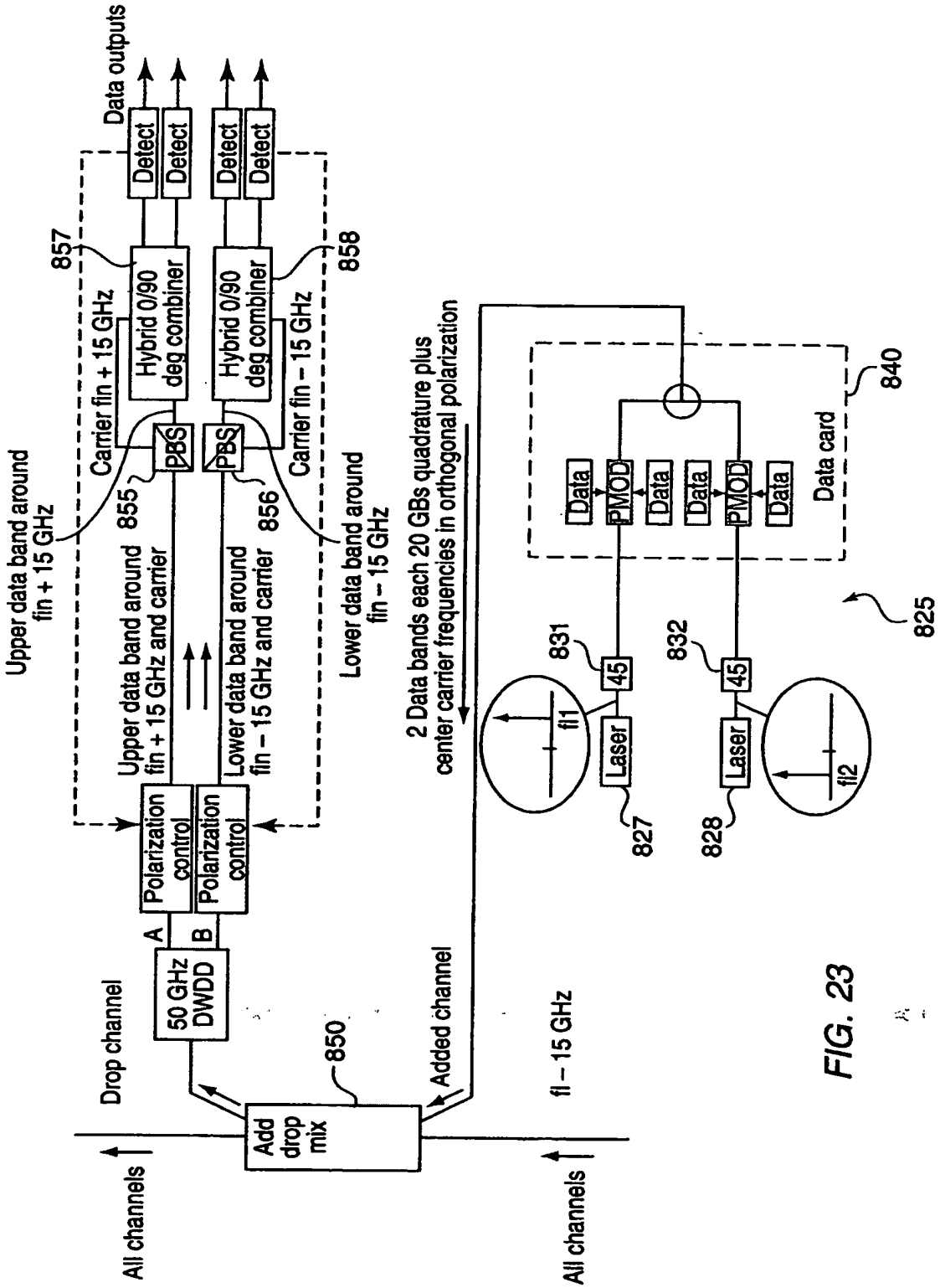

FIG. 23

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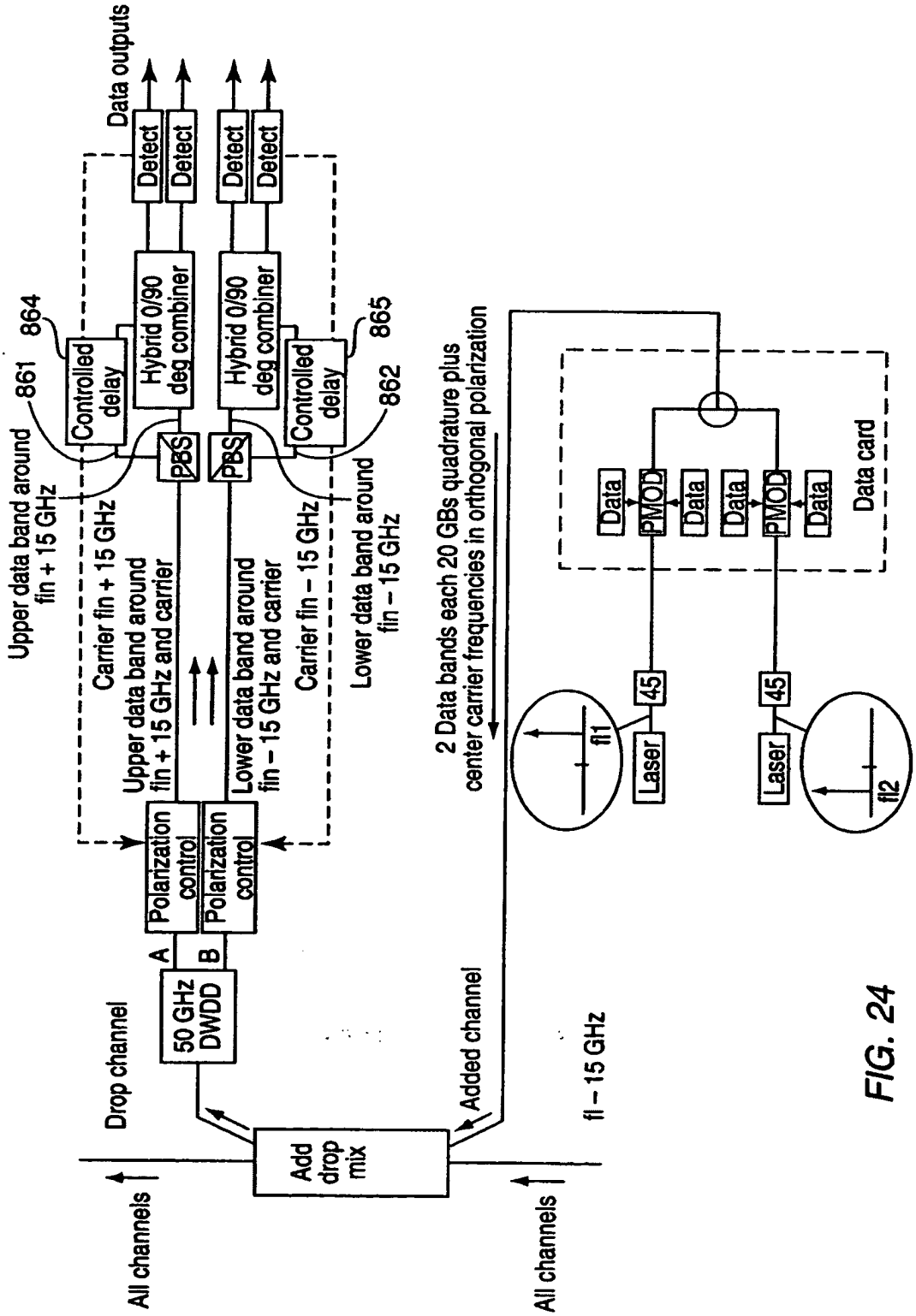

FIG. 24

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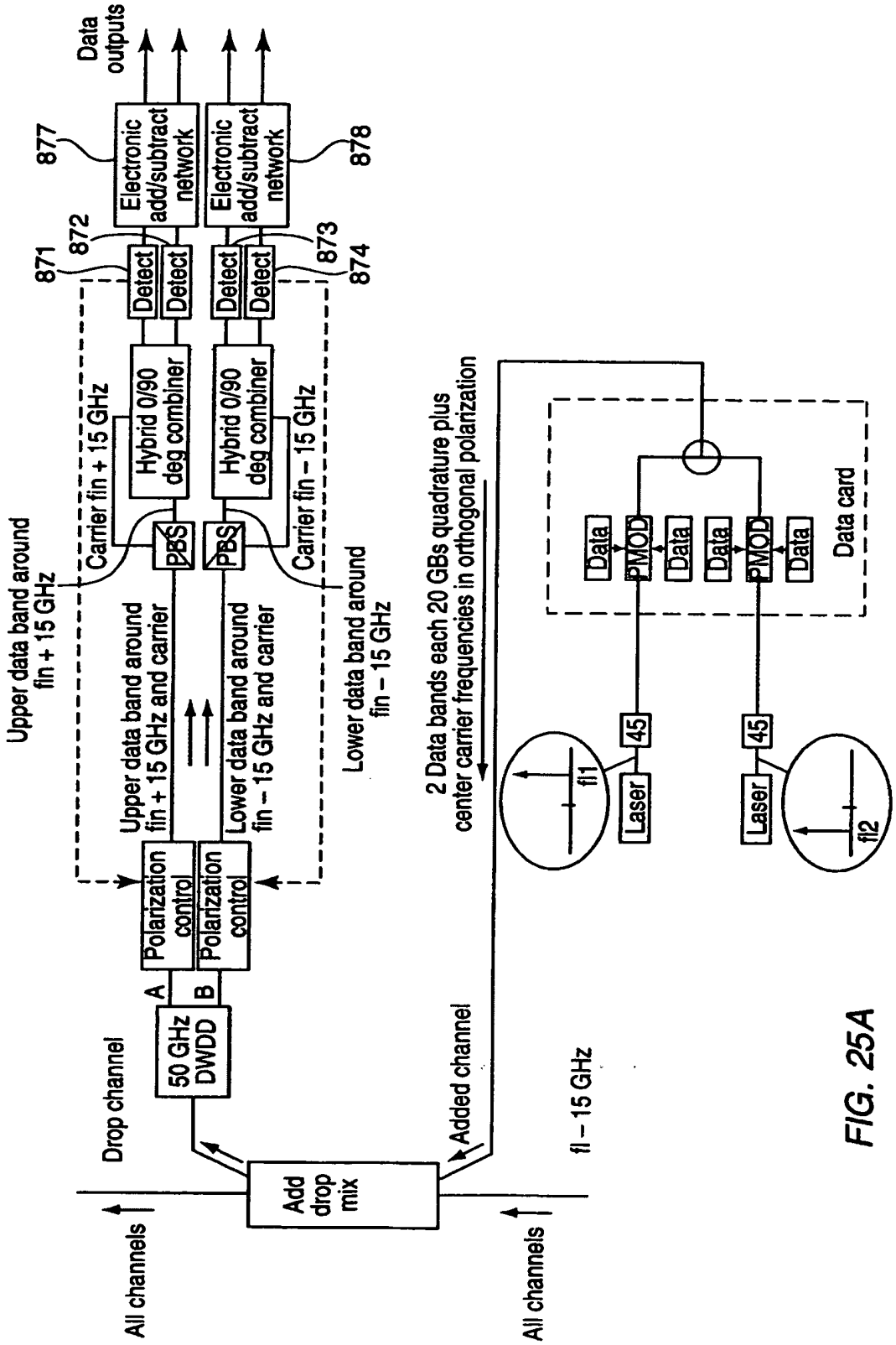

FIG. 25A

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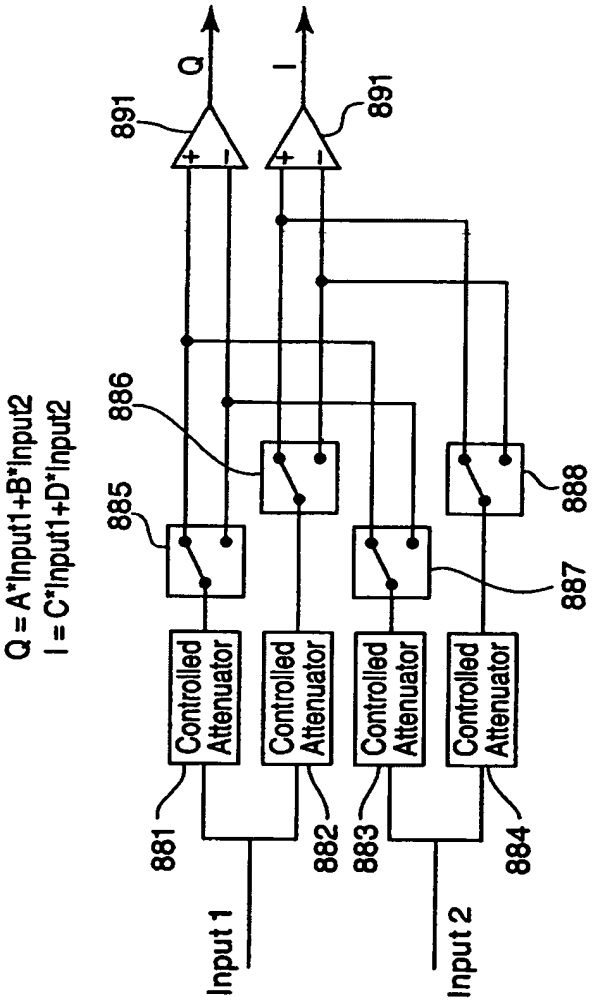

FIG. 25B

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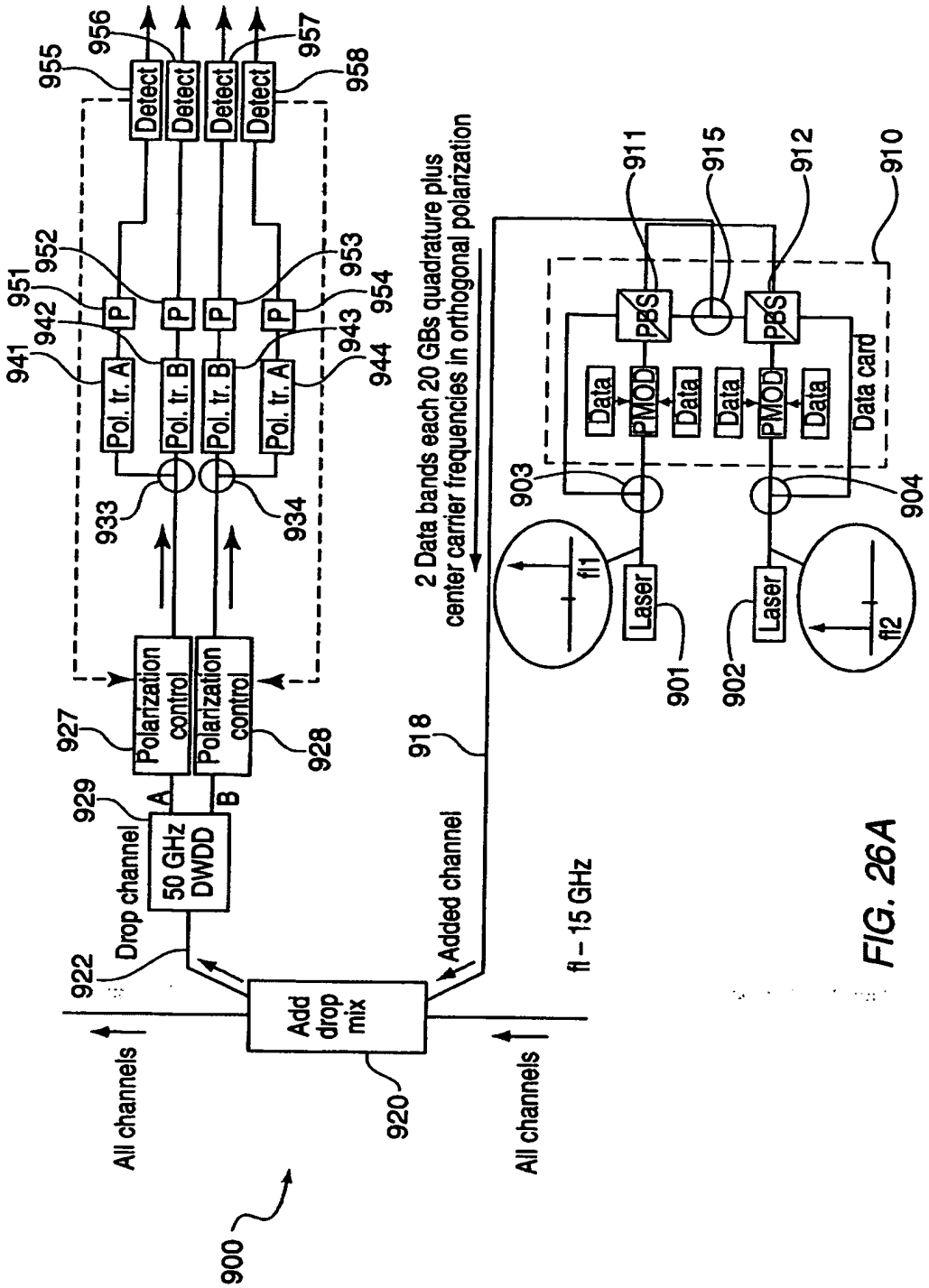

FIG. 26A

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HP
08/18/05

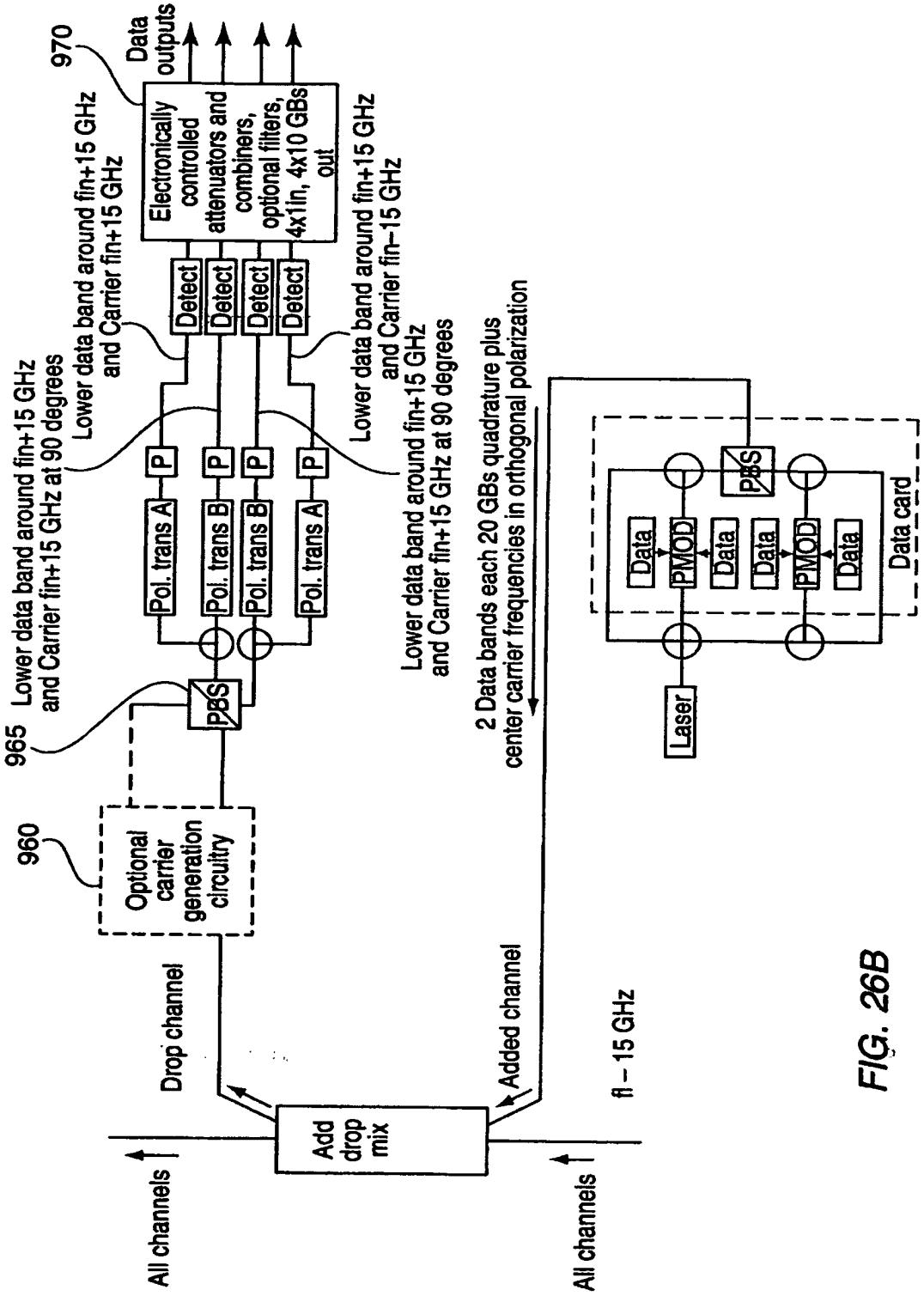

FIG. 26B

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DYP
08/18/05

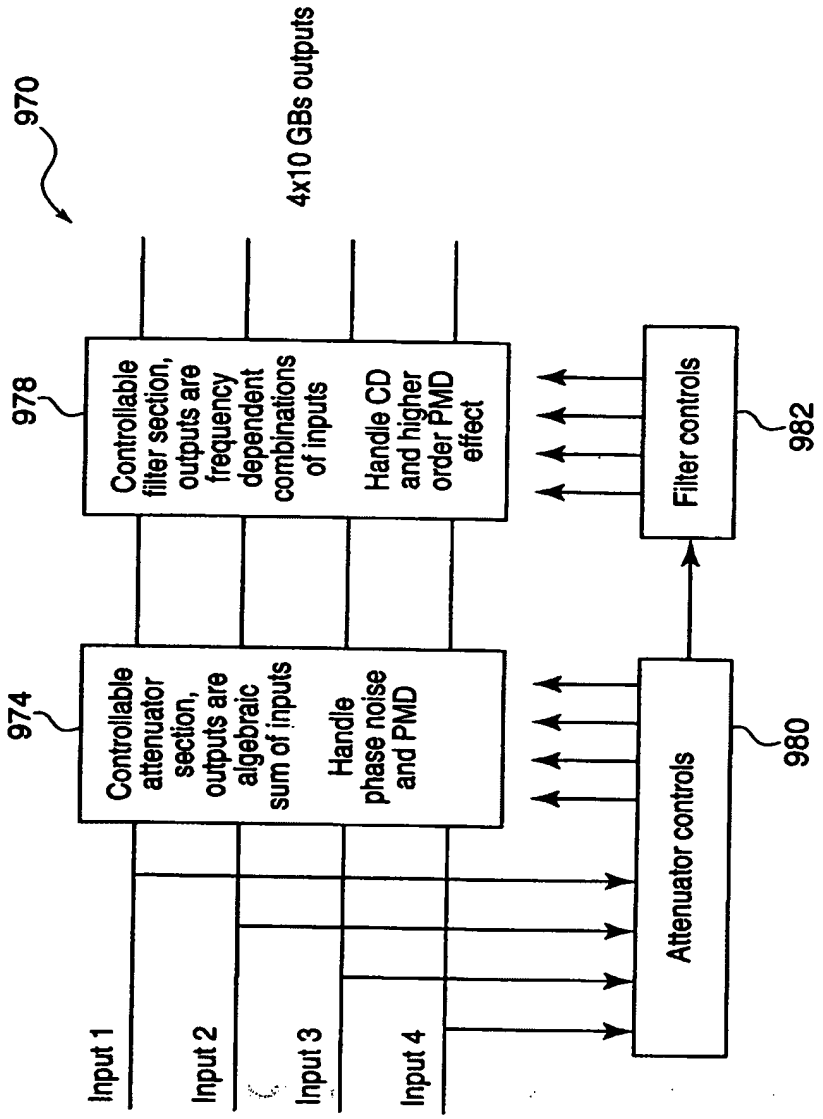

FIG. 27

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JC11

Approved
HP
08/18/05

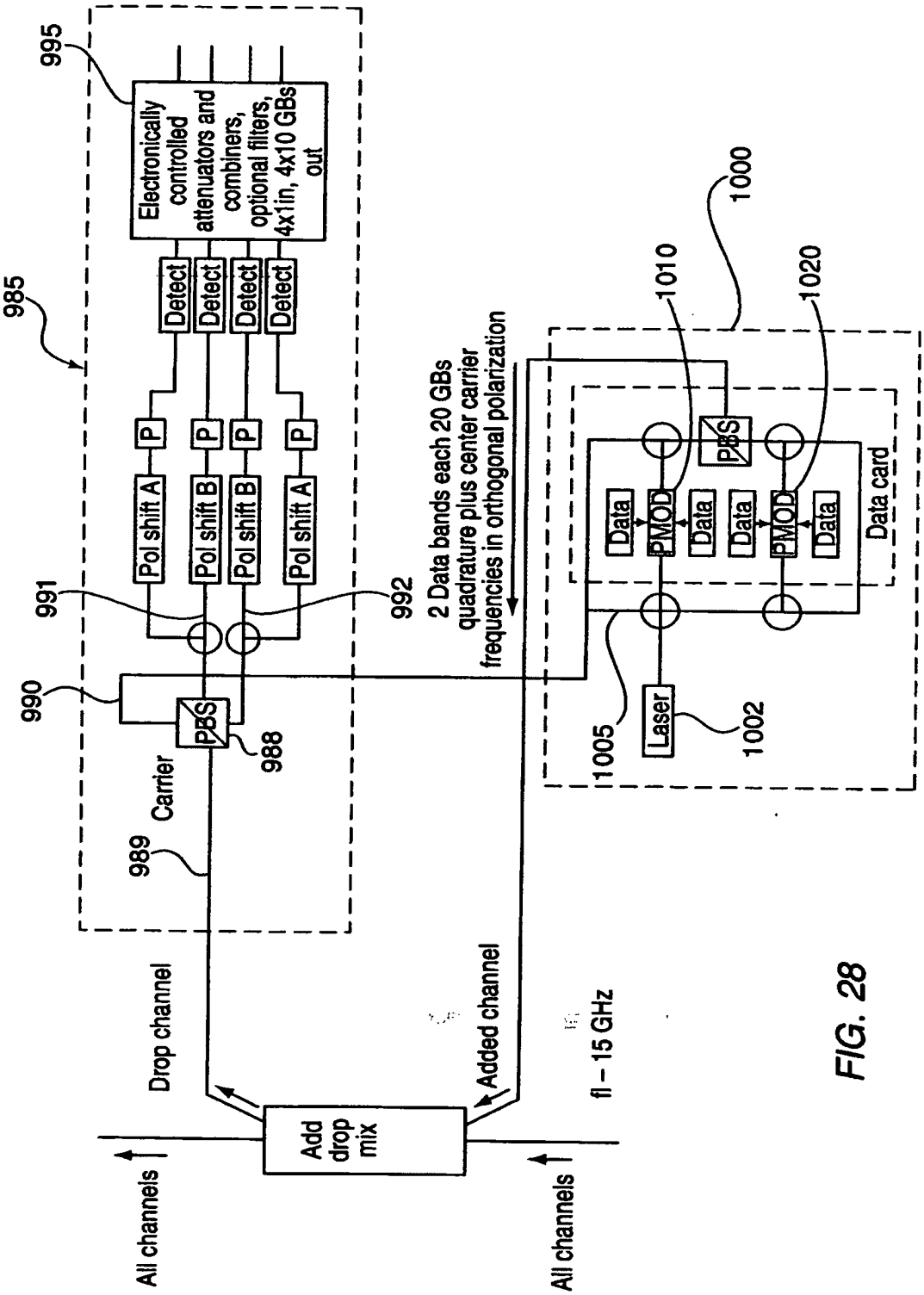

FIG. 28

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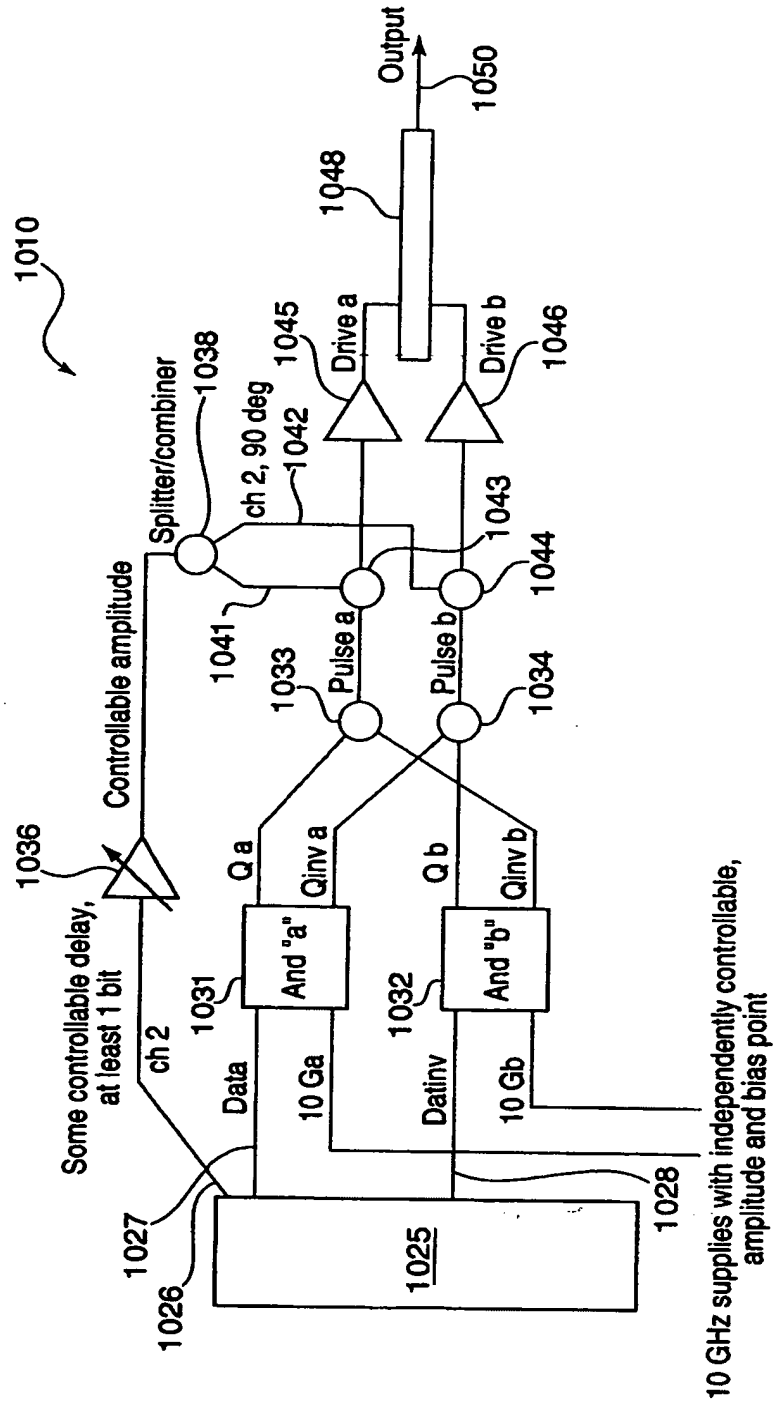

FIG. 29A

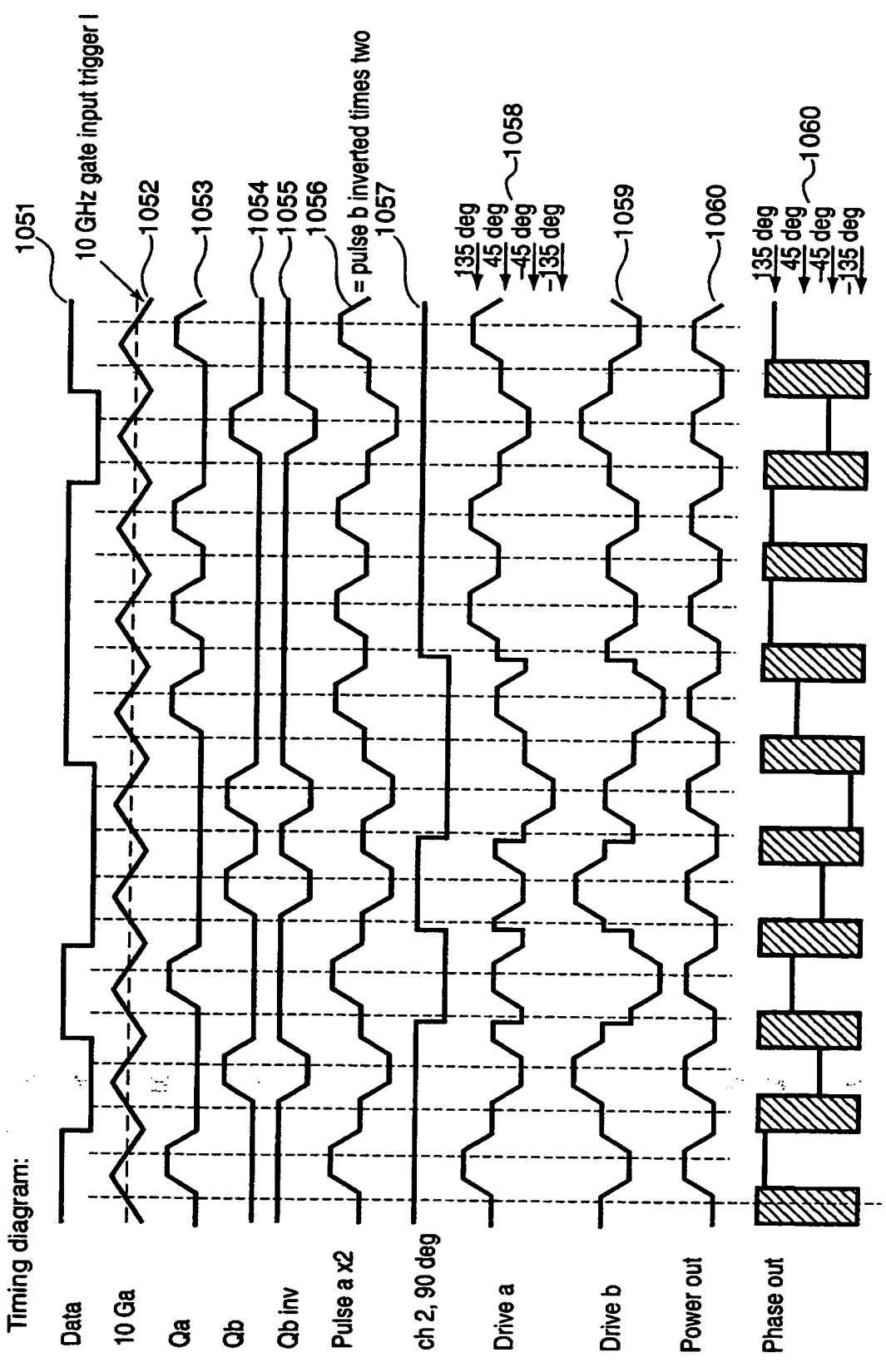
Timing diagram:
Data
10 Ga
Qa
Qb
Qb inv
Pulse a x2
ch 2, 90 deg
Drive a
Drive b
Power out
Phase out
1051
10 GHz gate input trigger I
1052
1053
1054
1055
1056
= pulse b inverted times two
1057
135 deg
45 deg
-45 deg
-135 deg
1058
1059
1060
135 deg
45 deg
-45 deg
-135 deg
1060

FIG. 29B

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AUG 18 2004
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HP
08/18/04

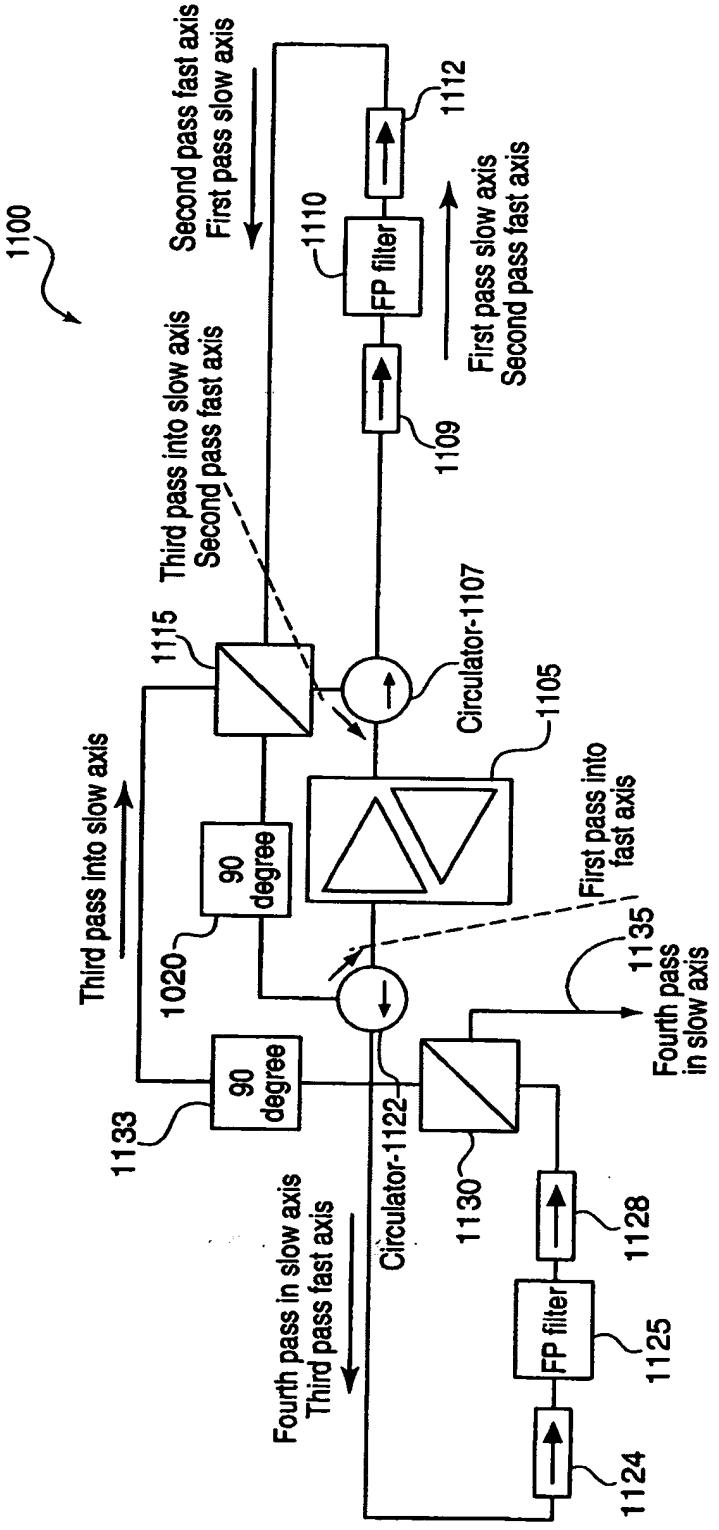

FIG. 30